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ABSTRACT

The Instructional and Leadership Development through Distance Learning (ILDDL) project was created to demonstrate ways that technology and distance learning can be used to address some of Florida's educational needs. The project involved the collaboration of Florida State University, the University of Florida, and nine Florida community colleges. The instructional program delivered by the universities was comprised of four courses during the 1995 academic year. Each community college assigned one or more facilitators responsible for all of the logistics involved in the courses, including class enrollment and communicating with the instructor. The first course, The American Community College, was administered through both distance education and on-campus teaching. Using grades and self-reported perceptions from surveys, both on-campus and distance classes did comparably well in the fall course. Responses to the second course, Instructional Leadership in the Community College, were very favorable, especially due to the performance of the facilitators. Technology for Teachers, the third course, had mixed reviews, with suggestions for providing more feedback and tightening its structure. The final course, Effective Teaching in the Community College, received mixed results as well, with 24% of students preferring the distance learning medium, and 54% preferring conventional learning methods. (Contains 36 references.) (YKH)

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INSTRUCTIONAL AND LEADERSHIP DEVELOPMENT THROUGH DISTANCE LEARNING

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Evaluation Report

April 1997

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The Florida State University

The University of Florida

Brevard Community College

Broward Community College

Daytona Beach Community College

Florida Community College at Jacksonville

Indian River Community College

Miami-Dade Community College

Pensacola Junior College

St. Petersburg Junior College

Valencia Community College

Evaluation Report

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April 1997

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- Section 2 The American Community College
- Section 3 Instructional Leadership in the Community College
- Section 4 Technology for Teachers
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Introduction

The state of Florida faces great challenges and opportunities due to the rapid growth and changes in its population. Areas impacted by this development include the state's community college and university systems. Expanding enrollments and student diversity have far-reaching consequences, and of primary concern to both types of institutions is how to provide enough quality staff to meet the needs (Florida Postsecondary Education Planning Commission, 1995; The Task Force on A Statewide Distance Learning System, 1995).

Across the country, instructional technology and distance learning strategies are drawing increased attention. Military services have explored distance learning for providing effective standardized global training (Barry & Runyan, 1995). The Colorado community college system is examining capital construction cost avoidances through distance learning strategies (J.L. Raughton, personal communication, May 23, 1995). Institutions are exploring possibilities for providing everything from counseling services to complete degrees for students who may rarely, if ever, set foot on campus (Jacobson, 1994a; 1994b; 1995; Lever, 1992; Rees & Safford, 1995; Riedl & Carroll, 1993).

The Instructional and Leadership Development through Distance Learning (ILDDL) project was one of five grants funded by a 1994 Florida legislative appropriation. The thrust of all the funded projects was to demonstrate distinct ways that technology and distance learning could be used to address some of the state's needs.

In particular, the ILDDL project involved the collaboration of Florida State University and the University of Florida in providing programs of support for the improvement of instruction and leadership development in Florida Community Colleges. The nine community colleges involved in the initial phase of the project were:

Brevard Community College
Broward Community College
Daytona Beach Community College
Florida Community College at Jacksonville
Indian River Community College
Miami-Dade Community College
Pensacola Junior College
St. Petersburg Junior College
Valencia Community College

Specifically, the instructional program delivered by the universities was comprised of four courses during its pilot, the 1995 academic year. Two of the courses target the improvement of instruction; one course is designed to enhance leadership, and one course provided context for both the instructional and leadership tracts. The first course, *The American Community College*, was taught during the 1995 Fall semester. Two courses: *Technology for Teachers* and *Instructional Leadership in the Community College* were delivered during Spring semester 1996, and the final pilot course, *Effective Teaching Practices for Community College Teachers*, was offered during Summer of 1996.

This report is broken into five sections providing information on the project through January, 1997. Section One is a "Project Overview". This segment discusses the characteristics and concerns that apply to the project across all four courses delivered by the project including theoretical foundations, roles of facilitators, and costs. Section Two, *The American Community College*, examines the first course offered by the project during the Fall of 1995. The third section, *Leadership in the Community College*, contains information concerning this course which targeted solely at administrators. The next section provides details concerning *Technology for* Teachers, the only Internet-based course offered by the project. The fifth section addresses the final course offering during the Summer of 1996 addressing *Effective Teaching in the Community College*. Each section is individually numbered with its own table of contents. Raw materials used to compile this report will be maintained at Florida State University.

About the Evaluation

The evaluation of the Instructional and Leadership Development through Distance Learning (ILDDL) project is a case study using quantitative and qualitative methods to build a picture of the demonstration project that could be shared. As in art, the picture is not the object being rendered but a depiction. Measures of central tendency help define forms like the lines created between shadow and light help us differentiate between the shapes of a banana and an orange. Ethnographic and anecdotal description contribute color and texture, such as we might use to distinguish between an orange and a rubber ball. Considering various perspectives contributes to understanding depth, context, and process. Using multiple methods and perspectives allowed some preset evaluation questions, such as "Are there differences in student outcomes between distant and on-campus classes?" and "Are project personnel progressing toward meeting the terms of the contract with the Board of Regents?" while allowing other questions to emerge during project execution. Though there are numerous threats to validity concerning generalizing findings beyond their native context, this study should contribute to refining emerging patterns in the expanding data base of distance learning literature. Cindy Landis Bigbie, an independent evaluator, orchestrated the evaluation effort. Numerous others coordinated with Bigbie as participant observers in the genre of naturalist inquiry (Worthen and Sander, 1987).

Theoretical Foundation

Project sponsored courses were designed without attempting to pre-define distance learning or distance education. Decisions related to course development were based on the perspective of learning as communication. The assumption is that good instruction is based on good communication, that good communication requires some shared domain of understanding between the instructor and the student, and that learning does not occur until the student finds some fit for new information within his/her domain of understanding (Bowman & Targowski, 1987; Dervin, 1981; Hoy & Miskel, 1987; Leslie, Hamilton, Holmes, Jarvis & McLendon, 1994; Targowski & Bowman, 1988).

Further, communication theory contends that since students and instructor are not wired together electronically, it can never be assumed that an idea in one's mind is reproduced exactly in the other (Aristotle, 1984; Bowman & Targowski, 1987; Franklin & Platt, 1994; Leslie & Routh, 1991; Martindale, 1993; Perelman, 1978; Performance Learning Systems, Inc., 1991). Instead, it is safer to assume a series of refining judgments through back and forth communication and interactions. If the two individuals communicating are separated by barriers such as time or space, the available channels of communication (i.e. non-verbal gestures, tone of voice, organization of message, etc.) change. The channels with which we are most comfortable may be limited or replaced by less familiar channels possibly mediated by some technology.

Using less familiar or mediated channels for communicating can be uncomfortable or require learning new skills (Joyce & Weil, 1986). Furthermore, the instructor is not the only source of information within the student's environment. Students can find they develop understanding from engaging with their instructor, their peers, and course materials. Instructionally, discomfort and equivocality can be reduced (Bantz, 1989; Duttweiler & Mutchler, 1990; Rogers, 1983; Weick, 1976; 1989) by attempting to develop harmony of information across multiple channels or sources (Armstrong & Bauman, 1993; Smolenski, 1986).

Course Facilitators

Each community college assigned one or more "facilitators", responsible for all of the logistics involved in the course (Moore, 1995). The facilitators' tasks included, but were not limited to:

- collaborating on curriculum,
- marketing the class,
- aiding in the registration process,
- organizing, distributing, and collecting all materials,
- coordinating class exercises,
- communicating with the instructor, and
- keeping attendance.

The facilitators all held graduate level degrees, including several with earned doctorates. Their fields of expertise varied: biology, mathematics, educational psychology, business, programming, staff development, etc. All had responsibilities in addition to their roles as facilitators; some were teaching courses and others were acting in an administrative capacity.

Though the majority of these faculty and staff had experience with different forms of technology, only two had extensive experience with distance learning environments. Why then, were they chosen to take on the added duties associated with this project? A number of answers may be appropriate here. For one, though the existence of distance education is hardly new, faculty often experience discomfort with new teaching strategies (Russell, 1992). Void of adept distance learning faculty, college administrators chose facilitators with reputations as leaders. The facilitators, as a whole, were considered to be pioneers at their respected colleges. They were a motivated group of individuals who looked forward to new experiences and opportunities with little trepidation. From the planning sessions through the duration of the courses, the facilitators were enthusiastic and thoughtful in their approaches to all of the tasks.

Costs

It is very difficult to separate costs associated with the development versus the delivery of courses in projects such as the ILDDL. While certain costs were directly associated with a specific course, i.e. the cost for satellite time and the use of studio facilities, it is not as simple to allocate individuals' efforts toward a particular course. It is even more difficult to separate development and delivery costs from the efforts expended in establishing collaborative relationships among the two universities and the nine community colleges in the project and to determine appropriate, available technologies to deliver instruction via distance.

At one level, since the project allocation was approximately $918,000 to develop and deliver four courses, the cost for each course could be calculated to be $229,500. At the other extreme, only costs that can be specifically allocated to a particular course would be considered as part of that course's cost. The question also arises, should total costs be considered, or should it be calculated per student? If a per student cost is considered, is the number of students registered during the demonstration phase of the project used, or should projections be made that include all twenty-eight community colleges, rather than the nine institutions involved in this pilot project? The different ways in which costs can be calculated indicates the many vantage points possible when determining the appropriate approach (Gilbert, 1978).

The activities of the community college facilitators included a variety of administrative and recruitment efforts that were not generally considered part of course development and delivery. Therefore it is very difficult to separate the cost of those activities from the cost for time spent discussing course content and delivery mechanisms with the university faculty and providing feedback throughout the semester in which a course was taught.

While the grant indicated that funding was provided for a faculty member to be given 75% release time during the academic year to serve as facilitator at each community college, institutions varied, at times significantly, from this approach. Several institutions divided the task among two or more individuals for a variety of reasons, including the need to serve participants at more than one campus and the institutions' belief that different individuals had the expertise required to serve as facilitators for the different courses. Also while only one course was offered during the fall semester, two courses were offered in the spring and the last one during the summer twelve-week term, complicating the determination of delivery cost per course since the facilitator cost was a constant, but the number of courses offered in a given term was not.

The role of curriculum development specialist (one at each of the two universities) became much broader than the job title indicates. Among the many responsibilities these individuals assumed were the following: designing curriculum; liaisoning within their university; consulting on curriculum with university faculty; dealing with registration issues; budgeting and funding allocations; identifying delivery resources, both within and outside the university community; coordinating to attain those delivery resources; developing and delivering marketing information to the facilitators; and communicating information between the lead instructor and facilitators.

The Complexity of Calculating Costs

From the previous discussion, it can be seen that development and delivery costs are inextricably woven to each other and with those related to the establishment of collaborative approaches and the determination of available delivery technologies. A more appropriate cost analysis would consider delivery costs for future offerings of these courses. There is also the issue of fixed versus variable costs. Among the fixed costs are the faculty assignment and the cost of satellite or other delivery technologies. Variable costs would include the number of facilitators required to coordinate activities at community college sites.

A comparison of the cost of delivering a distance course to a traditional on-campus section of the course may be an appropriate exercise. If a course has an enrollment that is larger than what is normally expected in an on-campus section, then to obtain a more reliable indicator, a per student cost should be used. Although administrative expenses would grow in some proportion to an increased numbers of students, certain costs remain relatively fixed, such as satellite distribution costs or maintenance of a Web Page. Per capita expenses would decline significantly if enrollment was extrapolated across all twenty-eight community colleges in Florida. Instructional broadcasts can potentially reach any number of students within the footprint of the transponder signal.

Issues Beyond Content and Instruction

The course, *The American Community College*, offered during the Fall 1995 semester, partially fulfilled requirements for delivering two instructional components to community college faculty and administrators as specified in the contract delivered under State University System letter dated March 29, 1995. The time frame for project completion was short -- 16 months in which four courses were to be cooperatively developed with input from the eleven institutions in the project, delivered at nine community colleges, and evaluated.

Identification of and consultation with project stakeholders including State University System faculty, leaders in the community colleges, K-12 educators, and national leaders in community college education took place during several meetings, including May 22-23 in Daytona Beach, June 28-30 in Orlando, September 5-7 in Cocoa Beach, November 13-14 in Gainesville, and April 18-19 in Miami. In these meetings, extensive dialogue occurred as curriculum and working relationships emerged collaboratively among university faculty and administrators, curriculum development specialists, community college administrators, and facilitators assigned to the project. Four of the meetings afforded the group the opportunity to visit distance learning facilities at different community colleges - Daytona Beach Community College, Valencia Community College, Brevard Community College, and Miami Dade Community College. Further refinement and formative adjustment of curriculum was accomplished through e-mail and telephone conferences.

Determination of alternative instructional models was effected through reviewing research literature, site visits (to community colleges in Florida, Texas, and Iowa), and assessing available resources for delivery strategies. Surveys were sent to facilitators at all nine community college sites. These questionnaires were completed with the help of technical experts at each institution and provided both broad and fine levels of information. Delivery strategies and potential problems were examined in consultation with a variety of experts including: Russ Adkins of Daytona Beach Community College, Michael Barry of the University of West Florida, William Bender of the University of Georgia, Jacques Dubois and Jayne Salvo of Brevard Community College, Lester Dumas and Evelyn Ploumis-Devick of the Florida Department of Corrections, Charles Friedrich, Ray Kennedy, Daniel Norwood and John Van Dyke of Florida State University, Catherine Fulford of the University of Hawaii, Mary Ann Havreluk of the Florida Remote Learning Services, James Hawkins of Komputer Kingdom, Madison Hodges and Avon Killion of WFSU, Cyndy Loomis and Tom Solano of Information Systems of Florida, Inc., G. Michael Love of MCI, Michael Moore of Pennsylvania State University, Alan Pizzato of Pensacola Junior College, James Raughton of the Colorado Community College System, Tom Russell of North Carolina State University, Darl Walker of Valencia Community College, Linda Wolcott of Utah State University, and Jane Zahner of Valdosta State University.

This project provided community college faculty and administration access to leading scholars and current research in their fields. The graduate level coursework provided an opportunity for participants to begin study toward advanced degrees or enhance their professional development. *The American Community College (ACC)* provided a foundation for both instructional and leadership tracks rooted in understanding the community college environment for the theory and practice of community college teaching with special attention to the needs of divergent learning styles, adult populations, culturally specific learning patterns, and leadership development in both organizational and curricular areas via distance learning technologies. Throughout the project, students (themselves faculty and administrators from the community college system) had access to a network of faculty, researchers, and educational leaders with specialized experience and knowledge of the community college system. The courses that are a product of this project will continue to have a shelf-life. It is reasonable to assume, using the communication model of layering channels, that the courses could remain vital and relevant using various combinations of delivery strategies.

The purposes of the *Technology for Teachers (T4T)* course included 1) to use existing technology to increase productivity, improve presentation skills, and facilitate the learning process; 2) to learn how to acquire new technology skills; 3) to build a conceptual foundation for infusing technology into the classroom; 4) to reflect on personal values; 5) to model choices and infuse technology into a classroom; and 6) to develop new syllabi infusing technology for individual courses taught by students in their home community college. Delivery strategies included independent study, small group activities, e-mail, and an interactive Web site on the Internet. The Web site was developed and refined though a partnership with NCR Corporation.

As a related spin-off project, the *T4T* course was able to draw 25 graduate students to act as teaching assistants (TAs) from an on-campus course studying distance learning. These TAs acted as a conduit for distant groups of students and provide systematic observation of the *T4T* course as it unfolded. Participation as a TA in the *T4T* course replaced a research paper requirement in the on-campus course studying distance learning and participants got firsthand experience in piloting and managing a distance learning class.

The *Instructional Leadership in the Community College* course explored current and emerging issues in community college instructional leadership. Special emphasis was given to building leadership knowledge and skills useful to current and future deans, department chairs, and other instructional leaders in setting priorities and direction, teaching and learning, managing conflict and legal issues, and assessing institutional effectiveness. Delivery strategies included independent study, small group interaction, a satellite broadcast, videotaped material, printed coursebooks, e-mail, and teleconferences.

A final course, *Effective Teaching in the Community College Teachers*, was delivered during Summer 1996. During this course, a team of instructors guided an examination of the science and art of effective teaching. Through consultation with community college facilitators, topics in the course included planning, curriculum design, student diversity, and evaluation techniques.

The Department of Educational Leadership, Program in Higher Education at FSU is currently reviewing whether the courses delivered during this project, alone or in combination with additional requirements, would meet the criteria for their College Teaching Certificate (already available on campus). All four courses represent work at a graduate level that should transfer into any Masters or doctoral program. A recurring concern for students and potential students, as reported by facilitators and from student surveys, is whether a doctoral program will be offered using distance technologies.

Issues Beyond Curriculum

As might be expected there were related experiences and findings beyond the immediate scope of developing coursework. Some of those examples follow.

Faculty and administrators could register to receive their credit for the course from either University of Florida (UF) or Florida State University (FSU). FSU and UF would split the FTE generated in half, regardless of the number of students registering for credit at one place or the other. The mechanism to split the full-time equivalent (FTE) for the courses uses existing procedures developed by the State University System of Florida (SUS) for other joint programs.

Each semester the registrar at FSU compiled a list that included student name and number, the course name and number, for each student enrolled in these distance courses. The number of credit hours, showing the division of credit hours by institution (one-half of the credit hours was assigned to each institution) were also included in this list. This list was sent by the Registrar at FSU to the Registrar at UF, and, if the enrollment was not equally distributed - which is usually the case since students are free to choose their institution - an adjustment was made by having the appropriate FTE transferred from one university to the other. This adjustment was possible since a joint program code was used to identify students in this program.

To enroll in these courses students needed to be accepted by their chosen university as a special student or regular graduate student. The universities managed the application and enrollment process differently. UF accepted students through their continuing education unit while FSU used the same system for processing applications and registrations as for on-campus students. Some deadlines were circumvented and some data was input by hand to accommodate the time frame of the courses.

The application and registration process revealed several opportunities for modifying current administrative systems at both universities to accommodate a distance learning market.

Standard university application forms were used by students who wanted to earn credit from FSU but had not previously applied. While students applying to FSU had the full range of student statuses available, the special student application was the most popular. Students at UF could only apply as special students through the UF Division of Continuing Education.

While FSU initially advocated that all students preregister for distance course offerings, it matched the flexibility of the UF policy for accepting applications and registrations through the second meeting of the distant classes. FSU on-campus students typically register by telephone using touch-tone signals to communicate with a computer. The time frame of the demonstration project demanded by the market being served meant the phone system could not be used. In most cases applications to the university were collected at the same time as registration information. A special form was adapted from FSU's Continuing Professional Development (CPD) program to register students for courses delivered at a distance. The form was developed in a spread sheet program, completed by hand and then entered into the FSU computer system manually.

Increased flexibility for students meant increased human intervention into automated processes. For example, a list of distance learners who would never be on campus at FSU had to be routed for the Dean's signature and delivered to Health services to remove an automatic medical hold that remains in place for on-campus students until evidence of a required MMR inoculation is provided.

Circumventing standard or automated systems had additional consequences. During the Fall term, not registering by telephone meant that FSU students did not have the opportunity to decline a $3.50 assessment for Florida Public Interest Research Group (FPIRG). Automatically generated receipts initially showed a balance owed to the university, making them useless for students seeking professional development reimbursements from their institutions.

Students' grades for the Fall semester were turned in on the same day (December 18, the normal campus deadline) at both FSU and UF. The grades for students enrolled at FSU were processed automatically and grades were delivered to students by mail at their homes like their on-campus counterparts. The grades for students enrolled at UF were processed by hand just like those of students in continuing education programs and mailed January 18, 1996. Facilitators, on behalf of their students, repeatedly expressed concern about the delay in the processing of grades since an official grade notification is the evidence required, in addition to a zero-balance receipt, for professional development reimbursement of tuition.

For the Spring term two different courses were offered, one originating from UF and one from FSU. Different due dates for course grades led to confusion and several students receiving "incomplete" grades for their effort. Responding to student needs for official grade reports required additional intervention into the automated systems by curriculum specialists, instructors, facilitators, and personnel from the Registrar's office.

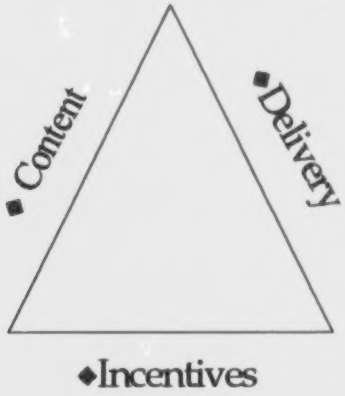
During the Summer term, FSU changed its policy for grade reports. Instead of mailing grades to students' homes, the university instituted a system whereby students would access their grade reports via telephone. This required a personal identification number (PIN), which the distance students in this project were not issued since they were special students. The Registrar's office had to print transcripts for each student, which were then sent to the facilitators for distribution at the various community colleges.

Lessons Learned

One of the lessons learned in this demonstration project was the complexity of dealing with multiple sites and the need to provide support to faculty teaching a distance course. This support includes clerical, administrative, and even professional help for the assessment of student work, such as essay exams and portfolios. To coordinate these activities that are particular to distance courses, one or more individuals need to be assigned to work with the faculty. These distance learning coordinators, depending on the number of courses offered, can be within a college at the university or can be assigned to a distance learning office that is university-wide.

As can be seen from the few previous examples, there are many opportunities to adapt institutional systems for a distance learning environment. In the future, the Registrar at FSU will work to encompass requirements for special student application and class registration in a simplified form process available on a World Wide Web page. It is also currently possible to issue an FSU card to distant students which, among other things, facilitates access to university libraries statewide and to FSU Academic Network Computing Services' features such as newsgroups. Coordinating these resources across institutional boundaries, even in collaborative programs, remains an issue. Identifying and accessing resources within the fragmented environment of a university is also no small task. The coordinating tasks alone could have overwhelmed an instructor without the support provided by project personnel. On several occasions the project drew on resources of the community colleges rather than the universities in the collaboration.

The lack of significant difference in learning as assessed by testing between on-campus and distance classes for *The American Community College* echoes the patterns in the literature (even with the limitations of all those studies). There have been no findings that threaten the assumptions for using a communication model for describing and predicting teaching/learning opportunities. It appears that increasing the distance between the teacher and learner forces both parties to consider communication channels beyond their usual, comfortable repertoire for face to face communication. This process warrants additional study but not to the exclusion of examining questions concerning policy and collaborations that provide context to the learning opportunities.



Adherence to a communication approach to distance education has suggested a model for understanding and judging both instruction and related policy. As previously mentioned, a communication approach suggests that delivery and content are inextricably related, each helping to define the other. But, delivery and content alone do not completely explain the dynamics of understanding a communication. A third component, reinforcement, provides the final leg of the triad by providing the rationale for engaging in the process. In other words, what provides the reinforcement for movement from the status quo?

In its broadest sense, reinforcement encompasses a range of constructs including motivation, barriers, and rewards (Daniels, 1989; Gilbert, 1978). Reinforcements can be tangible or intangible, positive or negative, and immediate or deferred (Daniels, 1989). Like any diffusion of innovation process, ignoring the reinforcement leg can, at worst, lead to collapse of the project and, at best, cause it to spin out beyond the scope of guiding goals (Rogers, 1983). Content, delivery, and reinforcement must be considered together. Using this triad as a lens seems to have value on the individual, intraorganizational, and interorganizational levels. Why should students suffer through unfamiliar delivery systems? Why should instructors take on additional students or learn new communication skills if the compensation and promotion systems don't recognize the effort? Why should institutions invest in infrastructure that potentially conflicts with current cultural assumptions? Why should potential competitors for resources and students cooperate?

The perspective offered by the triad suggests additional issues beyond the current scope of this project. As mail/delivery services, satellite footprints, and the Internet blur state boundaries, are there interstate issues that need to be anticipated? How can courses delivered at a distance be coördinated to avoid destructive competition among institutions in the state? Are there policies in place to curtail destructive competition among competing units for finite resources within a single institution? How will the devaluing of the term "contact hours" affect accreditation processes? What would be considered reasonable accommodation under The Americans with Disabilities Act (ADA) for a distance learning course? Are there ethical or policy implications associated with requiring prerequisites such as Internet access? As courses and course systems are developed in partnerships, how will issues of intellectual property be addressed or the right to package and market resulting products? What personnel performance criteria encourage or discourage using distance learning methods by faculty?

There are also questions that remain from a longitudinal or "big picture" perspective that may not be answered as individual courses are evaluated. Did the instruction offered impact the perceived problems of increased demand for higher education access and high turnover of system personnel? Did the needs identified by community college presidents and stated as organizing ideas for the project, adequately represent the immediate, concrete, perceived needs of full-time faculty, part-time faculty, and administrators in the community college system? Do layers of the institutions below the presidential level share these perceived needs? Did all segments of the target market have access to the courses offered? Will faculty and administrators transfer what they learn from the distance learning opportunity to their job tasks?

The Instructional and Leadership Development Through Distance Learning project provided an opportunity to kick the tires and test-drive four courses. Reviewing findings with colleagues affords opportunities to expand the number of perspectives and refine the consistent theory base for distance instruction. The evaluation for the first course suggests it was at least as adequate as similar on-campus courses and may provide previously unexplored flexibility. Classroom processes warrant additional study but not to the exclusion of exploring questions concerning policy and collaborations. The future for Florida constituents and the world is full of possibilities. In order to reach the potential that distance learning affords us, we must now focus on larger systemic questions related to needs. The current study contributes to the patterns that continue to emerge in the literature, but are we using theory and technology to solve problems that move the state forward in a concerted manner?

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The American Community College

THE AMERICAN COMMUNITY COLLEGE 1
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Course Description

This course was structured to enable students to gain knowledge of the community college as it has developed in the United States. Components of the course include the history and philosophy of the institution, its comprehensive mission and major functions, finance and governance structures, organizational culture, faculty, students, and curriculum. A final component of the course considered the future outlook for this evolving institution. National, state, and institutional level policies were explored, critical issues facing community colleges were identified, and reform and innovation were discussed in order to gain perspective and critical understanding of the community college in America.

Prerequisites: This course was designed for faculty and staff in the community college system. A second section of this course was offered by the instructor as an on-campus traditional course serving as a core course in graduate degrees in Higher Education. Students were assumed to have completed an undergraduate degree.

Course Numbers

EDH 5304	The Community College in America Florida State University
EDA 6053	The Community College in America University of Florida

Delivery Strategies

Independent individual reading
structured group activities
videotape
satellite broadcasts
e-mail
regular mail

Course Content

Originating out of Florida State University and led by a professor in the Department of Educational Leadership, *The American Community College* course was structured to enable students to gain knowledge of the community college as it has developed in the United States. Classes met once a week for three hours from September 13 through December 6, 1995. Course Content was organized into six modules:

- History and Philosophy
- Mission and Functions
- Finance and Governance
- Organizational Culture and Faculty
- Students and Curriculum
- Vision and Future

The course syllabus clearly outlined what was involved in each of the six modules: principal outcomes, assigned readings, videotape overviews, activities, dates and topics of satellite presentations.

Balancing the interaction among students, instructor, other students, and materials, each module was organized to contain at least one videotape session, a satellite presentation with one-way video/two way audio, assigned readings, and structured group activities. Organizing the course in this manner allowed the instructor to repeat content in a synergistic rather than a duplicative fashion. This approach also allowed for the use of many existing resources, keeping costs to a minimum, and expediently implementing the course.

The instructor's main responsibilities involved coordinating the class, creating and grading assignments and exams, designing, developing and participating in the videos as well as the satellite panel discussions. Instructor contact was limited to e-mail interactions, video sessions, and satellite presentations where the students could see and hear the instructor and his panelists, but the instructor could only listen to students one at a time via telephone.

Grades for the course were based on two essay examinations, a portfolio of materials, ten annotations, and participation. More detail on course grades is given in the "Summative Evaluation" section of this report.

Course Technologies

Extensive guidance on textbook and journal article reading requirements was provided in student and facilitator syllabi. Facilitators arranged for text books through their campuses' book stores. Several of the campus book stores had difficulty securing course texts in a timely manner. All eventually stocked books for the course. An alternative approach would have been to have students order their text books from the FSU book store which stocked books for the on-campus section of the course. An additional shipping charge would have been incurred. A small packet of reading materials was provided to each facilitator to put on reserve and supplement local library journal subscriptions.

Group facilitated activities and collaborative assignments were detailed in the facilitator syllabus and were designed to encourage student interaction and build understanding of the community college environment. Activities included debates on community college issues, a budget cutting exercise, and site visits with interviews of key community college personnel.

Each module of instruction included a videotape covering one or more sections of content that the instructor considered important. Sections ranged from 25 to 40 minutes in length and were distributed on 60 minute videotapes. Pre-production prepared by the instructor and curriculum specialist included scripting for a TelePrompTer using a word processor and graphics prepared with presentation software. Merging live video and graphic presentation material was done on-the-fly. Production and post production were done by the staff of WBCC, the public broadcast facility at Brevard Community College. Tapes were intended to be used by individuals or small groups who could control the viewing pace. Content took precedence over entertainment value (Russell, 1995). The videotapes were not intended to stand alone for instructional purposes but act as a confirming channel for important content as part of an integrative package. Based on student feedback, production graphics were moved from presentation software to word-processing software, reformatted and distributed as a note taking scaffolding used while viewing videotapes.

An orientation and six panel discussions were delivered using satellite and telephone technology. The panel discussions were designed as the final synthesizing event in each module. Satellite events originated in the studios of WFSU in Tallahassee. The planning document for each studio event was a production sheet which evolved in specificity during the semester. Panelists were mailed an orientation package and "met" during a conference call one to seven days before their scheduled broadcast to discuss the emphasis of the course module and possible questions they might be asked during the broadcast.

The studio signal for the broadcasts was "uplinked" from a facility co-located with the television station but owned and operated by Florida Public Broadcasting. The signal was bounced off a transponder in a Canadian satellite that was booked through a telecommunications broker headquartered in Boston. The signal for these programs used the C-bandwidth. Any facility, and the nine pilot sites specifically, with a C-band receiving dish could tune in the signal and receive the programming from Tallahassee. Uplink and downlink facilities and their associated personnel needed to be scheduled in advance to ensure the availability of resources. C-band was selected rather than Ku-band for use during Fall 1995 based on recommendations from the receiving sites, availability, and relatively lower rates for C-band transponders. Assumptions concerning the most appropriate bandwidth and satellite would change with access to a state-owned transponder.

Students watching these satellite programs could call in questions to a 1-800 number with rotating lines in the WFSU studio control room. Calls were answered and routed so they could be heard and addressed over the air. Questions were recorded in writing as a backup measure when a call was first answered and prior to routing. During the course, calls were initially spontaneous with students at the receiving sites calling as they were so moved. Next, one or two questions were seeded at each site to break the ice and stimulate discussion. The final and most successful approach for encouraging student calls was scheduling a seven minute intermission for site discussion after initial comments by the panelists.

The instructor's e-mail address was repeatedly provided to students during satellite broadcasts to encourage direct electronic dialogue. Several students took advantage of this channel to the instructor but it became obvious, based on feedback from the facilitators, that access to e-mail was not universal for participating community college faculty and administrators. As a result, a listserve program as a statewide student forum was never put on-line. All facilitators had access to off-campus e-mail through their college, FIRN, or a personal commercial service.

SunCom (Florida's statewide government telephone network) and long-distance telephone services. SunCom coordinated telephone conferences (teleconferences), e-mail, U.S. postal service, and next-day delivery services were critical for coordinating and implementing the course.

Personnel

Instructor

Joseph Beckham	Educational Leadership, FSU

Guest Panelists

David Armstrong	Division of Community Colleges
Deborah Austin	Tallahassee Community College
Louis Bender	Florida State University
Jan Bullard	Santa Fe Community College
Dale Campbell	University of Florida
Ana Ciereszko	Miami-Dade Community College
Edward Cisek	Division of Community Colleges
Catherine P. Cornelius	South Florida Community College
Phillip R. Day	Daytona Beach Community College
Marie Foster	Central Florida Community College
Dennis Gallon	Florida Community College at Jacksonville
Willis N. Holcombe	Broward Community College
David Leslie	Florida State University
Edwin Massey	Indian River Community College

Mark Maxwell	Office of the Governor
Robert McCabe	Miami-Dade Community College
Glenn Robertson	Robertson and Associates
William Snyder	Florida State University
Ann Southerland	St. Petersburg Junior College
Bob Sullins	St. Petersburg Junior College
James Wattenbarger	University of Florida

Facilitators

Greg Ballinger	Miami-Dade Community College
Paul Blais	Valencia Community College
Jen Day Shaw	St. Petersburg Junior College
Pat Ellis	Florida Community College at Jacksonville
John Henderson	Broward Community College
Milton Jones	St. Petersburg Junior College/Eckerd College
Rosemary Layne	Brevard Community College
Mattie Roig	Broward Community College
Jayne Salvo	Brevard Community College
Norma Thompson	Indian River Community College
Marcia Williams	Pensacola Junior College

Costs

Course Development

The course development process started during a meeting held in late May. This meeting was attended by professors at both universities, administrators at the community colleges and several individuals who were possibly going to be assigned as facilitators. Subsequent meetings held in late June and early September further refined course content, design, and delivery strategies. A professor in the Educational Leadership Department at Florida State University assumed the responsibility for course development and was assigned to teach the course in the fall. He received assistance from the curriculum development specialist at FSU. After the September meeting, the faculty member and curriculum development specialist spent two days at one of the community college sites in order to videotape lectures for the course.

An estimate of those course development costs which can be assigned to a specific course are as follows:

Faculty member	$17,486 *
May meeting (1/4 time)	1,766
June meeting (1/2 time)	2,024
September meeting (1/2 time)	2,665
Travel to videotape lectures	631
Total	$24,572

* includes salary and fringe benefits

Course Delivery

The professor's cost to deliver the course was incorporated into his regular teaching assignment at Florida State University. The facilitators were given partial release time from other assignments to help develop and deliver the courses. While it may be estimated that one-half of the facilitators' release time during the fall semester was dedicated to delivering the course (estimated at $4800 for salary and fringe benefits per facilitator) much of that time was spent evaluating and providing feedback for course modification. It is foreseen that future offerings of the course would not require such a high level of involvement.

The curriculum development specialist assisted the professor with many administrative and logistical responsibilities but at the same time was involved in many other activities as outlined earlier. As the term progressed, some activities that were very time-consuming at the beginning became routine or were modified to make them simpler; therefore easier to handle.

The videoconferences with panel presentations were the most expensive portion of the course. Satellite transponder time was purchased on a Canadian satellite (ANIK-E2) at a cost of $350 per hour until 5 PM (off-peak) and $580 per hour after 5 PM (peak). A one and one-half hour block of time (3:30 to 5:00 PM, Eastern time was purchased to test the systems at all participating institutions. Two hours of transponder time were purchased for each broadcast (3:30 to 5:30 PM, Eastern time), allocating the first half hour for the downlink sites to adjust their equipment. The actual teleconference was held from 4:00 to 5:30 PM, Eastern time. The studio billed $1000 for preparation and delivery of each two hour broadcast.

No charge was accrued from Florida Public Broadcasting for use of the uplink during videoconferences because use was scheduled during normal working hours. A 20 percent administrative charge was avoided by booking satellite time directly rather than through Sunstar, the Florida Department of Education teleconferencing service provider. The usual $100 per site downlink fee assessed by Sunstar was also avoided at the community colleges since they were participants in the project and programming was targeted for their employees. The production and duplication of the videotaped segments of the instruction were contributed by Brevard Community College, a very generous contribution to the project.

Mailing costs were higher than expected due to the short time between the beginning of the project and the fall semester. Modifications occurred while the course progressed, requiring the frequent use of express mail. The facilitators also used express mail to ship student exams and portfolios at the end of the semester. Courses currently in progress are using other strategies which have significantly reduced shipping costs.

Estimated delivery costs of *The American Community College* are as follows:

Faculty member	$ 0	
Facilitators (8) 1/2 time	36,200	*
Satellite - 1 time at $525	525	
Satellite - 7 times at $815	5,705	
Studio - 7 times	7,000	
Videotape stock	332	
Duplicating costs	230	
Mail and express mail	1,140	**
Total	$51,132	

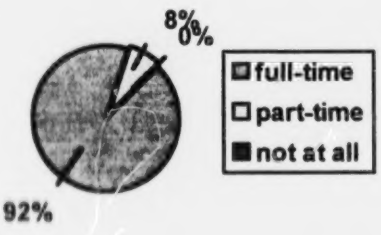
* This cost is expected to decline once courses have been pilot tested and delivery systems implemented that are less dependent on facilitators.

** Mailing costs were higher than expected since modifications occurred while the course progressed, requiring the frequent use of express mail.

Students

The American Community College course was intended for newly hired community college faculty, administrators recently transitioned from faculty roles, as well as community members interested in future employment with the college. However, the Course Survey filled out by the majority of course participants along with informal facilitator interviews reveal a different picture. Many of the students were full-time seasoned staff. Shown in Figure ACC1, 92% of the students were full-time employees of their community colleges, 8% were part-time faculty, and 0% were not employed at the community college at all. The majority of students were instructors at the community college though some administrative staff did participate in the class. Courses taught by these "students" ran the gamut: humanities, literature, nursing, psychology, math, computer science, reading, business, accounting, science, physics, calculus, tech prep, and more. Thirty percent of respondents' highest held degree was a bachelors, 63% had earned their masters, and 7% had their doctorates.

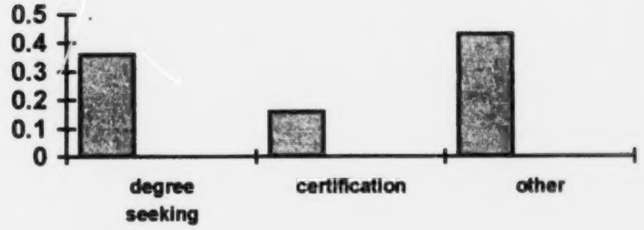
Figure ACC1
Employed by Community College



**Percentages calculated by survey responses.
Some data was unavailable.

Participants enrolled in the course for a variety of reasons. Thirty-six percent were enrolled in order to complete a degree, 16% were seeking certification, and 43% of the student respondents listed "other" explanations for taking the course, see Figure ACC2. Under the "other" category fell an array of reasons: job enhancement/promotion, personal enrichment, curiosity about distance learning, required by their employer, and needed for continuing contract.

Figure ACC2
Reason for Taking Course



Figures ACC3 and ACC4 show the make-up of the class. Sixty-one percent of the students that responded to Course Survey were females and 36% were males; eighteen percent were African Americans (AA), 73% Caucasians (C), 2% Hispanic (H), 0% Native American (NA), and 2% other (O).

Figure ACC3
Gender

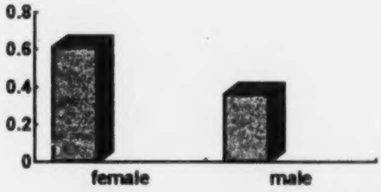
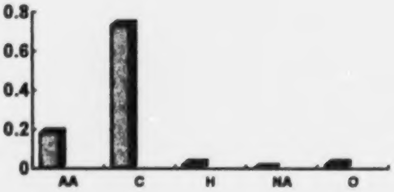
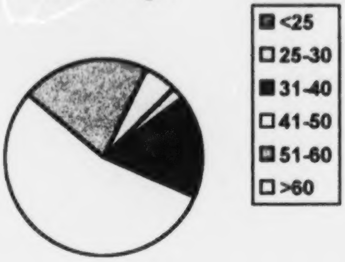


Figure ACC4
Race



The majority of course participants fell in the 41 to 50 year old range, though student ages ranged from the mid twenties to more than sixty. See Figure ACC5.

Figure ACC5
Students' Ages



Formative Data

This section provides information on the effectiveness of the course processes, strategies, and technologies. The data is provided to help those involved and/or interested in the project gain an understanding about things that did and did not work. Vices and virtues of the course components are discussed so that future courses may remedy the problems and model the positives.

The first half of this section will discuss responses provided by the students on the Module Surveys. Since the course was organized into six separate modules, the formative evaluation followed suit, and after each module, students were asked to respond to questions about the content, techniques, and technologies. The primary purpose of these surveys was to detect problems with the course and allow the instructor to make changes when necessary and possible throughout the semester. The secondary purpose for the Module Surveys was to provide feedback that could be used in the design of future courses.

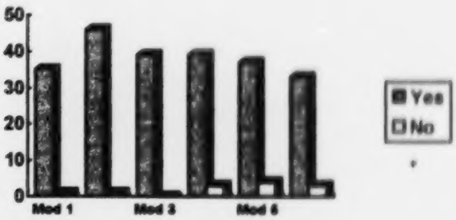
The latter part of this section will reveal students' responses to the Course Survey. This survey was used to learn about the student population and to assess learners' perceptions about the effectiveness of the facilitator, instructor and course content, strategies, and technologies. As with the Module Survey, the Course Survey will be used to benefit future courses.

Module Survey Responses.

While reviewing the Module Survey data, readers should be cognizant that the number of respondents for each Module Survey varies from survey to survey. Due to the large paper shuffle involved in the course and the logistical problems involved with being at a distance, the evaluator was not able to get responses from all students for the six separate surveys. It is also important to note that, in some instances, students would skip over certain questions when replying. These inconsistencies result in the varying numbers reported below.

Question 1: During this module, I learned something that was relevant to my life.

Figure ACC6

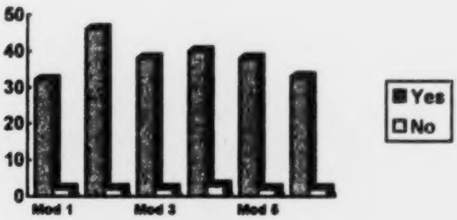


Most students felt that they had learned something in all of the modules that was relevant to their lives. This is not surprising, considering the majority of respondents were full-time employees at a community college. In fact, many students commented that the modules helped them confirm the importance of the community college and the role they play as employees of the institutions.

A few students felt that some of the content was not new. Specifically, the information on diversity had been addressed prior to the course by a number of the students. *"No, I did not just learn the material on diversity. I have learned a great deal from working at Miami-Dade Community College. We have several workshops on diversity."*

Question 2: I was aware of the learner outcomes pertaining to this module.

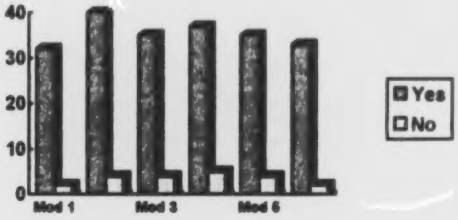
Figure ACC7



Students were aware of the outcomes and knew they could be easily found in the course syllabus. Many respondents remarked on the excellent organization of the course. *"The course is very well laid out. We* *are informed of objectives/outcomes well in advance. Questions are asked and answered. Thoughts are revealed."*

Question 3: I achieved the outcomes pertaining to this module.

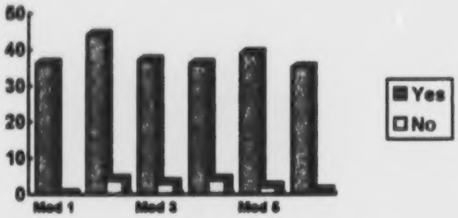
Figure ACC8



As the figure above points out, most students did feel they had achieved the outcomes related to the modules. But, many felt it was too early to properly answer the question. (**Remember - students were asked to fill out the survey after completing each module.) For instance, one student stated, *"No, I will need to restudy what was discussed."* This dichotomy of answers points out the varying degrees and styles of individual learning afforded by the course. Some students were further along at different points in the course and felt they had learned the material. Others felt more time and effort were required.

Question 4A: I felt comfortable using the satellite classroom.

Figure ACC9



Students enjoyed the satellite classroom for several reasons. It allowed access to very talented and informed experts that would otherwise be unavailable in a traditional classroom. Students were able to interact with other community college students around the state, allowing ideas and questions to be representative of Florida's community. Also, the capability to tape the sessions and watch the presentation repeatedly was appealing to participants in the course.

While students' comfort level with the satellite classrooms was satisfactory, there were several variables that made the technology uncomfortable. For instance, some students commented that the presentations proceeded too rapidly and that *"there was not enough time to digest or discuss information."* Also, there was some dissatisfaction with the conference table format of the sessions. The instructor and his panelists sat around a rectangular shaped table, discussing the topic, and entertaining questions from students calling into the studio. One student's comment summarizes the sentiment: *"The format could be more visually stimulating."*

Table ACC1:
Site Descriptions and Resources

Site	Class Description	TV	VCR	Phone	Speaker Phone	Fax	Computers	Email	Overhead Projector
Brevard	**Classrooms at each of the four campuses.**	✔	✔	✔	✔	✗	✗	✗	✔
Broward	Conference room with three long tables arranged in an open rectangle format	✔	✔	✔	✔				
FCCJ	**Board Room of the Administration building. Large room w/ 10 round tables surrounded by upholstered chairs**	✔ **4 built into walls**	✔	✔		✗	✗	✗	✔
Indian River	Regular classroom with capacity for 50 people. Long tables with 2 chairs per table - all facing towards monitor	✔	✔	✗	✗	✗	✗	✗	✔
Miami-Dade	**Conference room of Miami-Dade's Conference Center. Small room w/ an oval table and seating for about 12**	✔	✔	✔	✔	✔	✗		✔

Table ACC1 continued

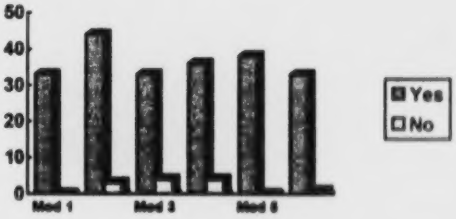
Site	Class Description	TV	VCR	Phone	Speaker Phone	Fax	Computers	Email	Overhead Projector
Pensacola	Theater style room with seating for approximately 100. Room in rear for table discussions & activities	✓	✓	✓	✓	✗	✗	✗	✓
St. Petersburg	Large meeting room with comfortable seating arrangement	✓ Large pull-down screen	✓	✗	✗	✗	✗	✗	✓
Valencia	Conference room with one large table surrounded by 20-24 chairs	✓	✓	✓					✓

✓ = Access within the classroom
✗ = Access outside of the classroom

Another limitation of the satellite class is tied to the issue of equipment availability. As shown in Table ACC1, all of the sites had different set-ups and access to equipment. Some students at sites without access to a phone in the classroom suffered loss of content during the satellite broadcasts. Apparently, when learners wished to call in a question, they would have to go out of the room to make the call, losing valuable program time. This quote tells of one student's experience with such a set-up: *"Since we must call from a separate room, and there was a long wait, I missed most of the program and finally hung up."*

Question 4B: I felt comfortable using the video.

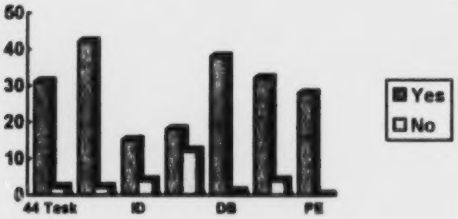
Figure ACC10



Learners felt *"the videos were well prepared and did a good job of conveying the subject."* Participants liked the option of being able to check out the videos and review them as needed. In the first two modules, learners complained about the fast pace of the presentations and the difficulty of taking notes. To remedy this problem, the instructor provided outlines of the tapes' contents and recommended that facilitators pause the tape upon student request. This seemed to take care of the difficulty. As with the satellite presentations, some remarked that the tapes could be more visually stimulating.

Question 4C: I felt comfortable using the exercises:

Figure ACC11



44 Task Group Exercise (44 Task): Students enjoyed this exercise and felt it was helpful in breaking the ice and getting to know classmates. *"Collaboration is important to classroom teaching and learning. This exercise was productive."*

Mission and Functions Exercise (M&F): Respondents felt this was a good group exercise. *"This exercise focused my attention on just what a comprehensive community college is supposed to do. It also gave me a better understanding in how the different community colleges have different missions and functions; no two are exactly alike."*

Interview Design (ID): Many sites did not conduct this exercise due to small class sizes and lack of time.

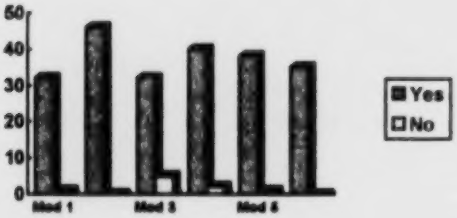
Budget-Cutting Exercise (BC): Students felt underprepared and undereducated to deal with this task. *"I felt uncomfortable making changes in items I knew so little about."* According to the professor of the course, the intent of this exercise was for students to experience the pain when deciding upon budget cuts. Apparently, many students were uncomfortable but few realized the discomfort was a planned outcome. Perhaps it could have been stated in the syllabus.

Debates (DB): When debates were carried out as intended, students felt comfortable with the exercise. But, some of the sites had to vary the format because small class sizes would not allow for a formal debate. For instance, some sites did individual presentations and pepers in lieu of the debates. Students at those sites felt this adjustment did not work well primarily because they were responsible for more work.

Pyramid Exercise (PE): Many colleges ran out of time and did not complete this exercise.

Question 5A: I had enough instructional/technical support for using the satellite classroom.

Figure ACC12



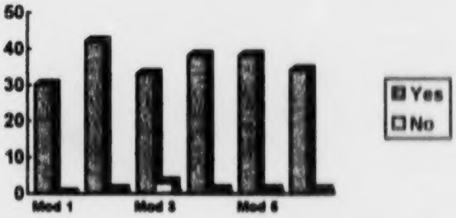
Respondents felt that *"the proper support was on hand."* In fact, many students used the open-ended response to this question as an opportunity to shower compliments on their facilitators. *"Our facilitator has truly done a wonderful job with this group. Her endless energy complete with charismatic personality has really made this course most enjoyable."*

Because of student feedback on the Module Surveys, two changes were made to the satellite procedures midway in the course. Apparently, many viewers were not able to clearly hear the call-in questions. So, the instructor made a practice of repeating the questions for the audience. Also, at the beginning of the course, only a few students would call in during the broadcast. To encourage more questions, the instructor implemented a formal break in the program, allowing students time to formulate questions.

During Module Three, one site was not able to receive the broadcast due to technical problems in re-coordinating systems following a hurricane. Students at that site had to watch a video tape of the session after the fact. Some were disillusioned with not being able to receive the satellite, others were satisfied using the back-up system.

Question 5B: I had enough instructional/technical support for using the video.

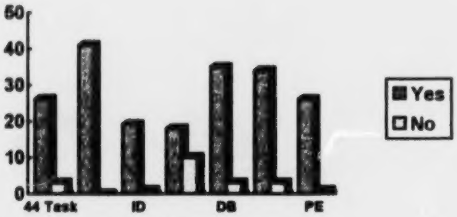
Figure ACC13



Students felt that *"not much assistance was needed but what was provided was more than adequate."* They had easy access to the videos and appreciated being able to check them out. Some students expressed the desire for more time to discuss and reflect upon the content.

Question 5C: I had enough instructional/technical support for the exercises.

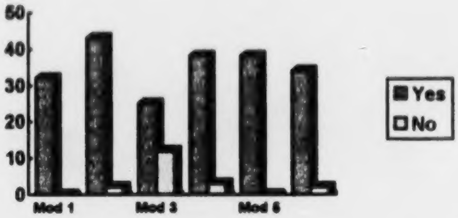
Figure ACC14



Participants stated that there was adequate support to carry out all exercises except for the Budget-Cutting exercise. In this case, they *"felt some guidelines or samples would have been helpful."*

Question 6A: The satellite classroom worked properly.

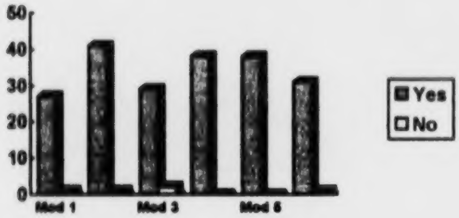
Figure ACC15



Overall, the students expressed that the *"equipment and broadcasts were fine."* Some problems did exist, primarily during Module Three due to clipping of questions being asked by students over the phone in the studio. The regular sound engineer was not present during this broadcast. The problem was addressed and did not recur in future broadcasts. A back-up system of writing the questions out on paper and providing the hard copy to the moderator was used.

Question 6B: The videos worked properly.

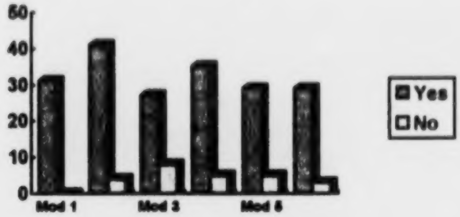
Figure ACC16



Students responded that *"the videos worked fine"* and that they *"were able to check them out at times that were convenient for them."*

Question 7: I got a chance to ask the questions I had or someone else in class asked them instead.

Figure ACC17



Most respondents stated that they did have the chance to ask questions, but there were a few exceptions, especially in the open-ended responses to this item. Students expressed concern with the lack of *"two-way back and forth in distance learning."* Specifically, there was unhappiness with the inability to have spontaneous questions answered. *"It is difficult to pick up the phone, dial in, and get to the faculty if you have a sudden question based on current discussion."* Along the same lines, *"things come up after the teleconference"* that are not easily addressed.

In addition to the limitations stated above, individual differences and styles may play a role in students' opportunities to have their questions answered. Some respondents stated that they felt uncomfortable talking on television and were therefore inhibited in having their interactive needs met.

Module Survey Summary.

Students provided positive and constructive feedback during the semester. With regard to course content, participants felt they had learned something relevant to their lives and that the content helped affirm the important role they play as community college employees.

Many stated that they were aware of and had achieved the intended learner outcomes. However, some students thought that they had not interacted with the materials enough to adequately assess if they knew the subject matter.

Comfort levels with the satellite classroom and video material were satisfactory. Students especially liked the option of checking out material for review. The learners also felt comfortable with the exercises. But, in some circumstances the exercises had to be dropped or altered because of small class sizes. Apparently, many of the exercises were developed for class sizes of six or more. It was difficult for the instructor to judge enrollment size prior to the class so he planned with a tentative number in mind. Future courses may want to consider alternative exercises to accommodate the true class size once it is known.

The level of instructional and technical support was adequate. Students found the facilitators at the various sites to be excellent in every capacity.

Problems with the satellite broadcasts and videos were few. They seemed to work fine except for some difficulty with reception of call-in questions during satellite sessions. The instructor handled this by restating caller questions for viewers to hear. Also, students voiced dissatisfaction with the fast pace of the videotapes. This problem was remedied by providing outlines of the tapes' content and encouraging facilitators to pause the presentation upon students' requests. This seemed to allow students ample time to take notes.

Finally, most students felt there were adequate avenues built into the course to get their questions answered. However, some students voiced a concern with the lack of easy two-way communication provided in the course. For instance, if students spontaneously came up with a question during the broadcasts, videos, or class exercises, they would have to jump through a number of hurdles to get an answer. In most situations, the question could be asked and answered, but usually with some time lapse involved. While learning still occurred using this set-up, motivation and comfort levels of individual students may have been lessened

Course Survey Responses

At the end of the course, learners were asked to respond to the Course Survey. This survey is used to assess students' perceptions concerning the effectiveness of the facilitator, instructor, and components of the course. For the first twenty-eight questions, students were asked to respond to the items using a five point scale with 1 = very poor, 2 = poor, 3 = average, 4 = good, and 5 = very good. Each item is listed below, along with the average response given by participants of the course.

Facilitator

1.	The clarity with which the class assignments were communicated by the facilitator	4.7
2.	The level of interaction between you and the facilitator	4.7
3.	The facilitator's preparation for class	4.7
4.	The facilitator's general level of enthusiasm	4.8
5.	The extent to which the facilitator encouraged class participation	4.8

6.	The general conscientiousness of the facilitator (e.g., in delivering materials, tuning in broadcasts, explaining assignments, etc.)	4.9
7.	The accessibility of the facilitator outside of class	4.7
8.	The degree to which the facilitator or technical person was able to operate the equipment	4.6
9.	Overall the facilitator was	4.8
Instructor		
10.	The extent to which the instructor made the students feel they were part of the class and "belonged"	4.1
11.	The instructor's communication skills	4.5
12.	The instructor's organization of the class	4.3
13.	The instructor's general level of enthusiasm	4.5
14.	The instructor's teaching ability	4.5
15.	The extent to which the instructor encouraged class participation	4.3
16.	The accessibility of the instructor (via telephone, e-mail, etc.) outside of class	4.2
17.	The level of interaction between you and the instructor	3.6
18.	Overall, the instructor was	4.4
Course		
19.	The timeliness with which tests were graded and returned	4.0
20.	The level of interaction between you and other students	4.6
21.	The level of interaction between you and the course material	4.1
22.	The degree to which the video presentations helped you gain a better understanding of the course content	3.8
23.	The degree to which the satellite panel presentations helped you gain a better understanding of the course content	3.9
24.	The degree to which the assigned readings helped you gain a better understanding of the course content	4.2
25.	The extent to which the room in which the class was held was free of distraction	4.5
26.	The promptness with which class materials were delivered to your site	4.4
27.	Class enrollment and registration procedures	4.5

28. Overall, the course was 4.1

29. Compared to conventional classroom courses, this course was:

Much Worse = 2%
Worse = 25%
The Same = 20%
Better = 34%
Much Better = 11%

30. The workload required by this course was:

Too Light = 0%
Moderately Light = 0%
Just Right = 11%
Rigorous = 41%
Too Great = 43%

31. Would you enroll in another distance learning course offered through the FSU/UF program?

Yes = 68%
No = 16%

32. Would you still have been able to take this course if it had not been offered through the FSU/UF Distance Learning program?

Yes = 14%
No = 80%

Course Survey Summary.

The Course Survey reflects a favorable opinion of the facilitator, instructor, and course. In response to all of the questions regarding the facilitator, instructor, and course, students rated them as "Good" to "Very Good". In fact, when asked to compare this class to most conventional classes, most respondents thought this class was the "Same", "Better", or "Much Better".

The greatest amount of criticism for the course was in response to the workload. About 85% of the students felt the amount of work in the course was rigorous or too great. One student's comments summarizes the sentiments of many, *"The workload was hard to keep up with due to demanding career responsibilities also! Very frustrating for all of us!"* Another criticism that was repeated in the students' open-ended responses was *that "there was barely enough time to do all that was required. Classes were very busy."* Also, *"there was not time or discussion built into the course to assimilate all the information."*

Even with these few limitations, most students *"really enjoyed the course."* Sixty-eight percent of the respondents stated that they would take another class through this program and 80% said they would not have had access to this course if it were not for the ILDDL program. In their open-ended responses, students asked that *"more courses like this one be offered"*, so that they could reach their educational and career goals. Many students echoed the need for *"a complete program to receive a graduate degree without leaving campus."*

Summative Data.

Is there a difference in the amount of learning that takes place in a distance learning classroom versus a traditional classroom? This question has been asked in a variety of contexts and the research shows repeatedly that there is no significant difference. Learners can learn equally as well in one circumstance as the other (Russell, 1995).

Why, then, is the question revisited once more in this section? *The American Community College* course was taught by the same instructor in both the distance learning and traditional format, so data from both classes were easily available. Since data were on hand, the Principal Investigator decided to talk in specific terms about the learning outcomes for this project's stakeholders, rather than rely on generalizations afforded by previous research. This section describes the students in each of the classes, the methodology used to determine grades, and results from final grades and students' responses on the Course Survey.

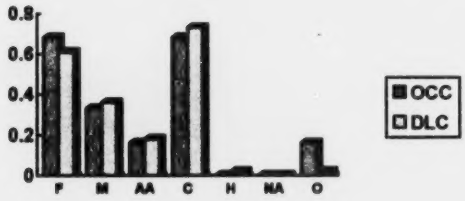
No preconceived experimental design was forced upon this study. Results reflect grades and perceptions from two natural settings. Therefore, some flaws with the design are inherent and caution should be used when interpreting the data.

Subjects.

The subjects were 82 students enrolled in *The American Community College* course originating from Florida State University. Twenty-three of these students enrolled to take the course in an on-campus classroom (section one), while 59 registered to take the class at a distance (section two). Students in the distance learning class were dispersed among nine community college settings around Florida. See Section Two for a detailed description of the sites and the number of students at each. Both formats were taught by the same instructor.

The two classes were similar in gender and race composition. According to responses from the Course Survey, the on-campus class (OCC) was approximately 68% female (F) and 33% male (M); the distance learning class (DLC) was 61% female and 36% male. Racial distribution was also similar with the OCC having approximately 16% African American (AA), 68% Caucasian (C), 0% Hispanic (H), 0% Native American (NA), and 16% Other (O), and the DLC being approximately 18% African American, 73% Caucasian, 2% Hispanic, 0% Native American, and 2% Other.

Figure ACC18
Gender & Race



Though gender and race distributions were similar, the groups differed in age, reason for taking the course, and whether or not they were employed by a community college. Figure 5.2 shows the ages of enrolled students. In the OCC, 32% of the students were below the age of 25, 37% were 25 to 30, 11% were 31 to 40, and 21% were 41 to 50. In the DLC, no one was below age 25, only 2% were between 25 to 30, 16% were 31 to 40, 52% were 41-50, 20% were 51 to 60, and 5% were older than 60.

Figure ACC19
Ages

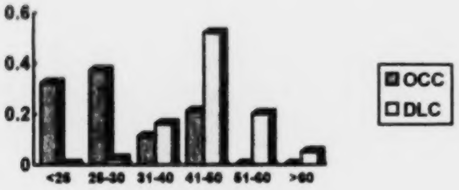
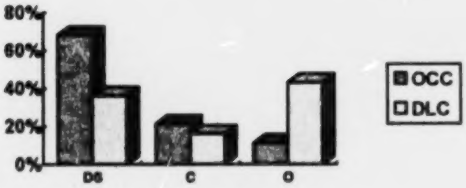


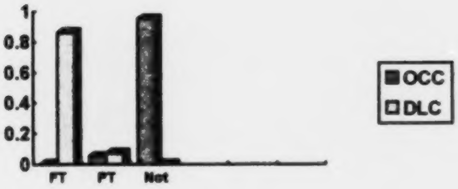
Figure 5.3 reveals students' responses on the Course Survey as to why they took the course. For the OCC, 68% of the students were degree seeking (DS), 21% were taking the class for certification (C), and 11% listed Other (O) as their reason for taking the course. Of the DLC students, only 36% were seeking a degree, 16% were getting certified, and 43% said there were "Other" reasons for participating, such as continuing education, job enhancement, as a work requirement, and to learn about distance learning.

Figure ACC20
Reason for Taking Course



Another clear distinction between the two groups was their involvement with a community college. Ninety-five percent of the OCC students were not employed by a community college, and 5% were employed part-time. On the other hand, all of the DLC respondents who completed the question were employed at a community college, 86% full-time and 7% part-time.

Figure ACC21
Employed by Community College



Procedures.

As stated previously, this study was not designed in rigid experimental format. Essentially, the two classes are compared "as is", including student composition, course content, and grading procedures.

The instructor, goals, content covered, and assessment criteria remained constant in each venue. Delivery strategies, student demographics, classroom environments and institutional resources varied between the on-campus and distant classes and varied among distant sites.

Grades in both classes were based on two essay examinations, a portfolio of materials, ten annotations and class participation.

Each of the two in-class essay examinations accounted for 30 points of students' course grades. The first covered course topics one through three and the second covered topics four, five, and six. They each consisted of six short-essay questions. The instructor graded all of these exams, comparing them to model answers containing all essential points of the module content.

The portfolio documented three team projects: the position paper from a classroom debate, a site visit analysis based on a visit to a community college, and final recommendations and supporting rationale for an institutional budget-cutting exercise. In addition, the portfolio included a reflective paper on students' personal philosophy of education. The portfolio was evaluated on a satisfactory/unsatisfactory basis. If there were any deficiencies in the portfolio, students were given the opportunity to correct and resubmit the materials. Satisfactory portfolios were awarded 25 points.

Article annotations had to cover a balance between research reports and other writings found in scholarly and professional journals. Also, they had to include topics ranging across all six of the course modules. Ten points were awarded for submission of the annotations, one point per annotation.

Because of the inherent difficulty in assessing a student's level of participation in the course, a surrogate measure, class attendance, was used. Five points were awarded to those who attended class regularly. Students who missed three or more class sessions did not receive points for participation.

The following scale was used to determine final grades:

A = 95 points or more
A- = 90-94 points
B+ = 85-89 points
B = 80-84 points
B- = 75-79 points
C+ = 70-74 points
C = 66-69 points
C- = 61-65 points

Results.

Table ACC2 presents descriptive statistics on the students' mid-term exams, final exams, and final course grades.

Table ACC2: Student Grades

Group	Mean	SD	N
On-Campus Class Midterm	25.5	3.2	23
Distance Learning Class Midterm	25.9	4.2	54
On-Campus Class Final	27.2	3.2	23
Distance Learning Class Final	27.8	3.0	51
On-Campus Class Final Course Grade	93.3	5.4	20
Distance Learning Class Final Course Grade	94.3	5.9	48

The number of students in each group varies from the original number of students enrolled to take the course. This is due to students either withdrawn from the course or receiving an incomplete. Means and standard deviations were so similar for both groups that it was unnecessary to proceed with more complicated statistical analyses. Clearly, differences between the two classes, if any, were trivial.

In addition to the lack of difference in students' grades, students' perceptions of the instructor and course varied minimally. Table ACC3 compares students' responses to the Course Survey. (Note: Questions show the average response on a rating scale of one to five, 1 = very poor, 2 = poor, 3 = average, 4 = good, and 5 = very good.)

Table ACC3: Responses to Course Survey

Instructor	OCC	DLC
The extent to which the instructor made the students feel they were part of the class and "belonged"	4.4	4.1
The instructor's communication skills	4.8	4.5
The instructor's organization of the class	4.2	4.3
The instructor's general level of enthusiasm	4.7	4.5
The instructor's teaching ability	4.7	4.5
The extent to which the instructor encouraged class participation	4.5	4.3
The accessibility of the instructor (via telephone, e-mail, etc.) outside of class	3.8	4.2

The level of interaction between you and the instructor	3.9	3.6
Overall, the instructor was	4.7	4.4
Course		
The timeliness with which tests were graded and returned	4.8	4.0
The level of interaction between you and other students	4.3	4.6
The level of interaction between you and the course material	4.0	4.1
The extent to which the room in which the class was held was free of distraction	4.1	4.5
Overall, this course was	4.5	4.1
The workload required by this course was:		
Too Light = 0%	0%	0%
Moderately Light = 0%	0%	0%
Just Right = 11%	21%	11%
Rigorous = 41%	63%	41%
Too Great = 43%	16%	43%

The instructor and the course received high marks from participants. Yet, both groups rated *"the level of interaction between you and the instructor"* somewhat lower than they rated other items. Also, students in the on-campus class rated the *"accessibility of the instructor"* lower than students in the distance learning format. This conflicts with immediate intuition that the on-campus students should have had easier access to the instructor. Apparently, the avenues of teacher/student communication built into the distance learning format were sufficient.

Also worth noting, both groups felt the workload was extensive. Even though most students in the on-campus course were full-time, degree-seeking individuals, they agreed with the distance learning population, most of whom were working full-time as well as taking the class; the course requirements seemed rigorous.

Summary

Using grades and self-reported perceptions from surveys, both on-campus and distance classes did comparably well in the Fall course. After 214 articles in the literature (Russell, 1995) and the comparison between on-campus and distance classes for this project, one should feel confident (even with the limitations of those studies) that there is no significant difference in learning as assessed by testing between on-campus and distance learning classes.

Such comparisons between characterizations of classes may be misleading. Using the communication model for describing teaching/learning opportunities, it is predictable that choosing appropriate multi-layered channels and sources for communicating content, just as failing to choose appropriate channels, will result in no significant difference between these simple categories of classes. Bad instruction compares to bad instruction and good instruction compares to good instruction. Increasing the distance between the teacher and learner, even as measured in feet, simply forces both parties to consider communication channels beyond their usual, comfortable repertoire for face to face communication. This process warrants additional study but not to the exclusion of examining questions concerning policy and collaborations that provide context to the learning opportunities.

Instructional Leadership in the Community College

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Course Description

This course explored current and emerging issues in community colleges instructional leadership. Special emphasis was given to building the necessary knowledge and skills needed by current and future deans, department chairs and other instructional leaders for providing effective leadership to their colleges. This course was designed to fulfill part of the area of concentration for the doctorate in higher education administration at the University of Florida. This course would count as an elective in the doctorate in higher education administration at Florida State University. (3 graduate credits)

Prerequisites: This course was designed for administrators in the community college system. Students were assumed to have completed an undergraduate degree.

Course Numbers

EDA 5931	Instructional Leadership in the Community College Florida State University
EDA 6931	Instructional Leadership in the Community College Faculty University of Florida

Delivery Strategies

Satellite orientation session
Videotaped instruction
Audio teleconferences
Group activities
Reading assignments

Course Content

Originating out of the University of Florida and led by a professor in the Institute of Higher Education, the *Instructional and Leadership Development in the Community College* course was developed using a team-based approach. This course was first offered by the University of Florida in the spring of 1995 to the East Coast Professional Development (ECPD) doctoral cohort in Deland, Florida. This early pilot was co-developed by the University of Florida professor and a campus president at Florida Community College in Jacksonville.

The goals for the course were as follows:

1. To gain a current knowledge base of instructional leadership by examining community colleges today and as "learning communities" of the future by reviewing effective practices, trends and issues through examination of the literature, participating in module activities, group discussions, individual and team projects.

2. To develop strategies to work effectively with administrators, faculty and staff on needed change in the community college in the areas of: leadership, priorities and directions for the community college, faculty hiring and evaluation, teaching and learning, management of conflict and legal issues, and institutional effectiveness.

3. To contribute to the field of instructional leadership by suggesting recommended changes in local, state and national practices, policies and resources which support the continuous improvement of instruction and innovation in current and future delivery methods of community colleges.

The course content was organized under six topics:

- Instructional leadership in the community college
- Linking vision to programs and services
- Changing faculty roles and its implications for hiring and evaluation
- Managing conflict and legal issues
- Improving teaching and learning
- Assessing institutional effectiveness

The ECPD students in the pilot course researched the literature, surveyed best practices around the nation, discussed and debated the issues in each area, examined and delineated the desired outcomes for learning in each area and produced a learning framework and set of materials which became the essential core of information used in the course. Once the ECPD students had completed their work on the six modules and the initial offering of the course was complete, the six doctoral student projects were reviewed thoroughly with the curriculum developer at UF.

The developer determined to offer the six modules in six in-class sessions at each college site and in six independent study sessions. This design provided students with flexibility in studying the course materials as well as created some structured group and team-based activities both in and outside the classroom. Each on-site facilitator became an integral liaison between the professors and the students. Facilitators provided students with additional materials, lead discussion groups, and facilitated the Audio Roundtables in each in-class session. These roundtables brought top researchers and practitioners in the field into the classrooms via phone conferences to talk with students.

A graphics design company was selected by the curriculum developer to assist in the design and conceptual framework for organizing the course materials. After much study and prototyping, a format was created in which all printed materials had a consistent look that would be easy for students to navigate. These extensive course materials were organized into two Coursebooks, each a 3" ring binder.

A very carefully designed facilitator's guide was prepared to help coordinate the actions of facilitators, students at the community college sites, and the UF faculty for success in this course. This guide was given only to site facilitators and would, over the course of the semester, give them extensive direction, organization and resource materials.

For example, the guide included answers to prepared problems, a class agenda for each in-class session, and a written description of each in-class activity. Facilitators were given flexibility in preparing for these in-class sessions, recognizing that each college, each group of faculty and college staff had unique issues and needs which were desirable to incorporate into the course experience. These materials are available from FSU in the College of Education and the Department of Educational Leadership in the College of Education at UF - the project partners.

In addition to preparing printed materials, video tapes were prepared for each of the six topics or modules. These were designed and produced as 20 minute introductions by the instructor on each of these topics, offering students both state and national perspectives from the field. These videos incorporated interviews with leading resource people, community college professionals who held state positions in their respective professional areas: instruction, student affairs, business affairs, executive leadership, and state government.

Personnel

Instructor

Dale Campbell	Institute for Higher Education, UF

Guest Panelists

Dick Alfred	University of Michigan
Joseph Beckham	Florida State University
Linda Cannon	Consultant to Higher Education, GA
Dennis Gallon	Florida Community College at Jacksonville
Walter Gmelch	Washington State University
Pamela Grey	University of Florida
Bill Law	Montgomery Community College, TX
Al Lorenzo	Macomb Community College, MI
James Ratcliff	University of Pennsylvania
Chuck Spence	Contra Costa Community College District, CA
Linda Timmerman	Navarro College, TX

Facilitators

Hep Aldridge	Brevard Community College
Gail Hawks	Miami-Dade Community College
Pat Ellis	Florida Community College at Jacksonville
John Henderson	Broward Community College
Mattie Roig	Broward Community College
Jayne Salvo	Brevard Community College

Costs

Course Development

Course design began during the first meeting held in May 1995. This meeting was attended by professors from both universities, administrators from the community colleges and several individuals who were possibly going to be assigned as facilitators. Subsequent meetings held in late June, early September and November further refined course content, design, and delivery strategies. A professor from the Institute of Higher Education in the College of Education at the University of Florida developed the course materials with the assistance of the curriculum development specialist at the University of Florida, other faculty at the university and faculty and administrators at several community colleges.

As with the first course, *The American Community College*, the curriculum development specialist had many responsibilities beyond the design of curriculum - she became the liaison to the project at the University of Florida; coordinated the activities of consultants and faculty at the university; handled registration issues within the institution; assisted in budget and funding allocations; identified and coordinated delivery of resources, both within and outside the university community; and acted as the conduit of information between the lead instructor and facilitators.

An estimate of those course development costs which can be assigned to a specific course are as follows:

Faculty member	$27,391	*
Consultants	3488	
May meeting (1/4 time)	1,766	
June meeting (1/4 time)	1,012	
September meeting (1/4 time)	1,333	
November meeting (1/4 time)	870	
Video production	6690	
Print production	1545	
Total	$44,095	

* includes salary and fringe benefits

Course Delivery

The professor's cost to deliver the course was incorporated into his regular teaching assignment at the University of Florida. The facilitators were given partial release time from other assignments to help develop and deliver the course. Since the material had been developed the previous semester, the facilitators were provided with a very complete package, necessitating little modification or last-minute delivery of materials. For this course it may be estimated that one-fourth of the facilitators' release time during the spring semester was dedicated to delivering this course (estimated at $2400 for salary and fringe benefits per facilitator. The facilitators met with students every other week, arranged for telephone conferences, structured group activities and discussions among the students, facilitated registration, and were liaisons with the professor and curriculum developer at UF.

The curriculum development specialist assisted the professor with many administrative and logistical responsibilities and was the primary liaison with the facilitators.

A one-hour satellite videoconference was scheduled as the orientation session. The faculty member presented an overview of the course and students were able to call in with questions before deciding whether to enroll in the course. Subsequent class discussions were structured as audioconferences - scheduled every other week - with experts from across the United States as guests. Students had the opportunity to discuss current issues with the guests. These audioconferences were easily scheduled through the State of Florida telephone network (SunCom) by contacting the operator by phone and requesting a "meet me" teleconference. The date, time, and telephone number for the audioconference was provided to the facilitators via e-mail. Each institution paid for its share of the long distance call, a very minimal fee, less than $10 per hour per site.

Estimated delivery costs of *Instructional Leadership in the Community College* are as follows:

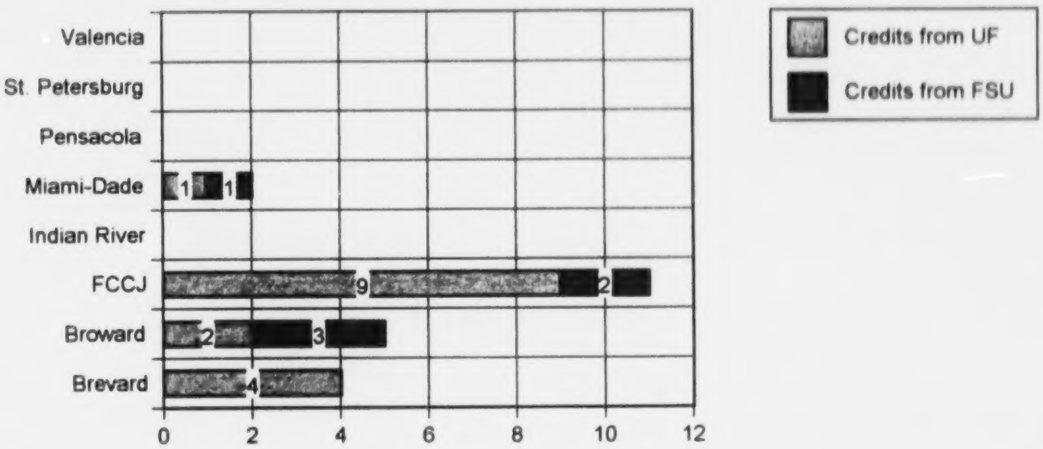
Faculty member	$ 0	
Facilitators (4) 1/4 time	9,050	*
Satellite	600	
Audio conference guests	1,050	
Textbooks	1085	
Duplicating costs	316	
Mail and express mail	125	
Total	$12,226	

* This cost is expected to decline once courses have been pilot tested and delivery systems implemented that are less dependent on facilitators.

Students

A total of 23 students enrolled in the *Instructional Leadership in the Community College* course. See Figure IL1. Low enrollment may be explained by similar course offerings being provided by competing institutions. For instance, it is possible that no one from St. Petersburg Junior College signed up to take the course because there is a comparable course offered by the University of South Florida. In fact, out of the nine sites involved with the Instructional Leadership and Development through Distance Learning project, only four sites participated in this particular course. The issue of state and regional competition is discussed further in the Project Overview section of this report.

Figure IL1
Students Enrolled by Community



Seventy-five percent of the students enrolled in the course were women compared to 20% males. See Figure IL2. At Florida Community College of Jacksonville, female faculty and staff participating in a program to explore careers in administration were granted permission to take the course, thus explaining the disproportionate numbers.

Figure IL2
Gender

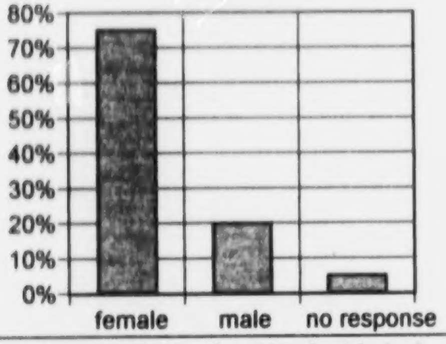
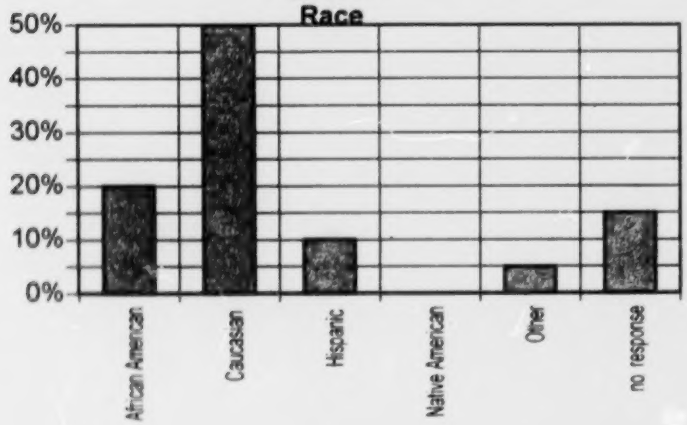


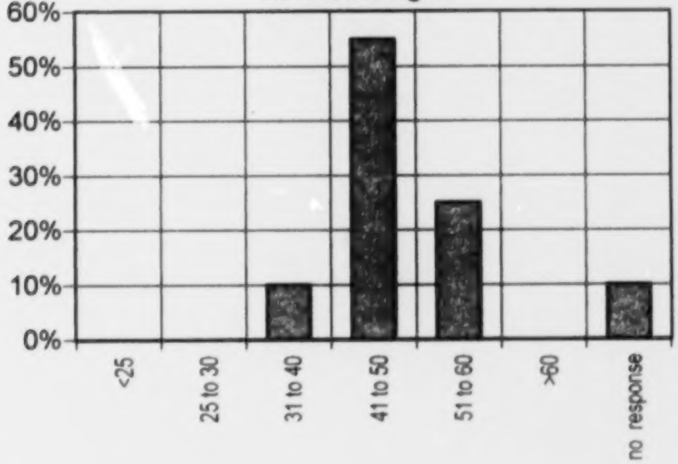
Figure IL3 provides further insight into the make-up of the class. Twenty percent of the students responding to the Course Survey were African Americans, 50% Caucasians, 10% Hispanic, 0% Native American, 5% Other, and 15% of the respondents did not identify their race.

Figure IL3
Race



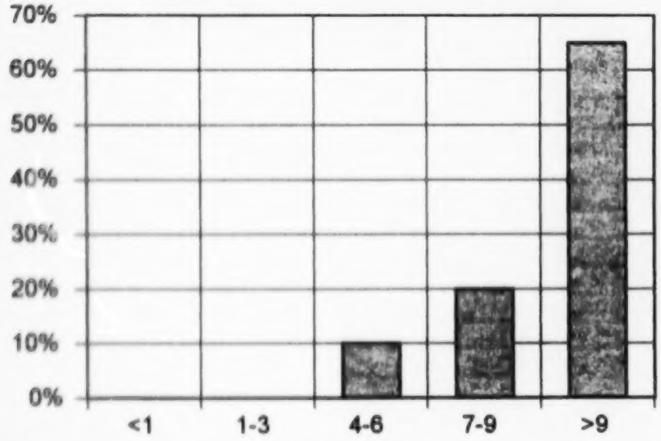
As figure IL4 shows, the majority of students were 41 years of age or older. In fact, no one in the course fell into the 30 years or below range. This makes sense when one considers the content of the course which was designed to inform current and future deans, department chairs, and other instructional leaders. One could assume that students enrolling in this course would have several years of experience in the educational arena, thus excluding younger educators.

Figure IL4
Students' Ages



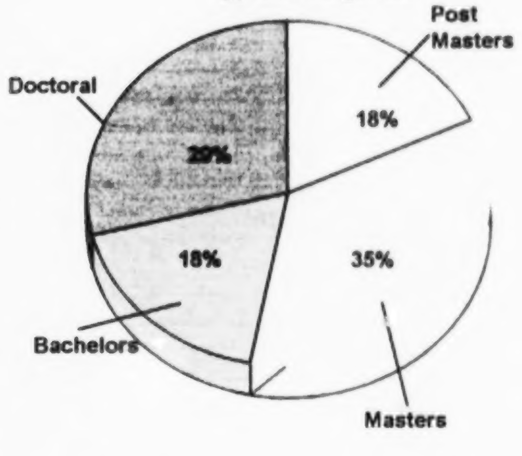
As inferred by the age of course participants, many of the students were long-time employees of the community college system. None of the respondents had been employed by the community college system less than three years, 10% had been employed from 4 to 6 years, 20% from 7 to 9 years, and 65% for over 9 years. See Figure IL5.

Figure IL5
Years Employed by Community College



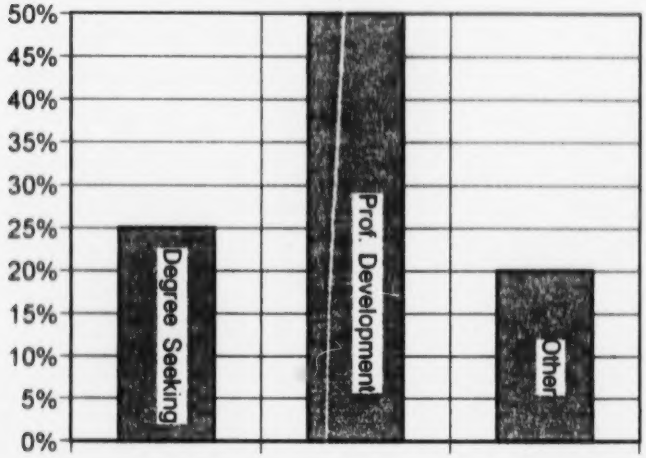
The majority of students were full-time employees of their community colleges serving in faculty/teaching positions. Courses that they taught ranged across all disciplines: Respiratory Care, English, Leadership, Writing, College Success Skills, Religion, Logic, Geography, Conservation, Government, Health and Fitness, Adult Basic Education, Economics, Computers, Natural Science, etc.. When asked what type of degree they held and from which discipline did it come, again the answers varied. Most of the respondents held a Masters Degree or higher and the remaining respondents had their Bachelors Degrees. See Figure IL6.

Figure IL6
Type of Degrees



When asked, "what was their reason for taking the course", most respondents indicated that they were taking it for professional development; though one quarter of the students said that they were taking the course in order to earn a degree (Figure IL7).

Figure IL7
Reason for Taking Course



A need for instructional leadership courses is indicated by student responses to the question, "Would you still have been able to take this course if it had not been offered through the FSU/UF Distance Learning program?" Eighty percent of the respondents said they would not have had access to such a course if it had not been for the program (Figure IL8). In addition, 80% of the respondents said that they would enroll in another distance learning course offered through the ILDDL program (Figure IL9). These answers indicate there is a need to bring higher education instruction and access to advanced degrees to professional people working at the community college level.

Figure IL8
Would you still have been able to take this course if it had not been offered through this project?

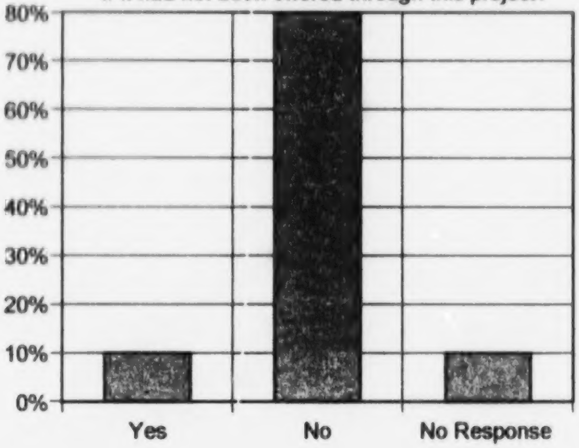
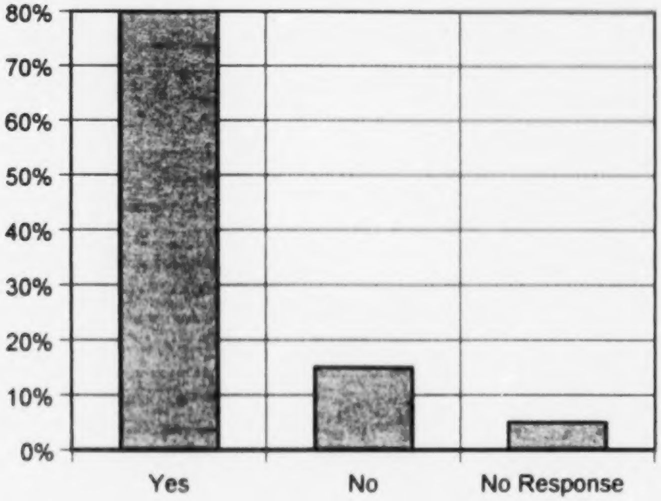


Figure IL9

Would you enroll in another FSU/UF DL course?



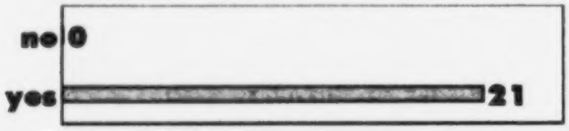
Formative Data

During the course, students were asked to fill out and return a midcourse survey and an end of course survey. The midcourse survey was administered in order to detect and remedy problems with the course while in progress. The end of course survey was distributed to better understand the student population and its perception of the course. Together, these instruments provide information on the effectiveness of course processes, strategies, and technologies along with appropriateness of course content. This section presents an overview of the survey results.

Module Survey Responses

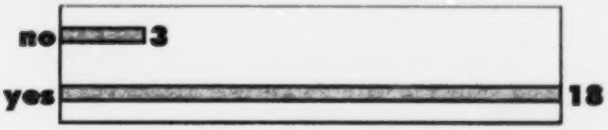
Students were asked to complete the midcourse survey after the conclusion of the second module. This distribution plan provided ample time for necessary and feasible modifications to occur.

Question 1: **After completing the first two modules, I learned something that was relevant to my life.**



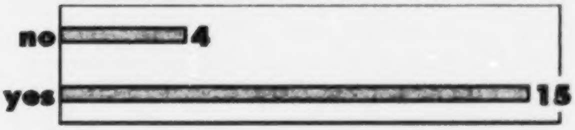
All respondents felt that they had learned something relevant to their lives. In particular, many students indicated that the information on institutional vision and goal setting was pertinent and practical. *"I've learned about visions as they relate to instruction and how I might move that vision to reality."*

Question 2: **I was aware of the learner outcomes pertaining to each module.**



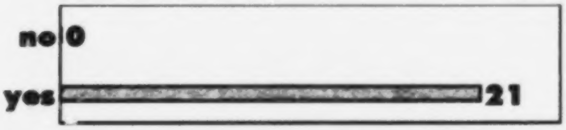
Most students thought the course was well organized with the outcomes clearly laid out in the introduction to each module. The few people that stated they were unclear on the module outcomes also indicated that this was a temporary condition. Due to the unfamiliarity with a distance learning setup, it is not unusual that some students take a longer time acclimating to the materials and processes.

Question 3: **I achieved the outcomes pertaining to each module.**



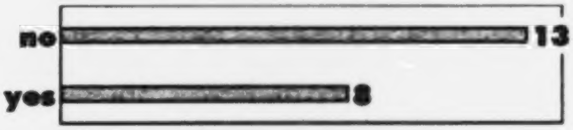
The majority of respondents felt that they were achieving the outcomes, though some felt their success was difficult to discern since they were in the midst of the learning process. In addition, four students voiced concern over completing assignments, feeling that the amount of work required was burdensome in addition to their administrative/teaching responsibilities. *"[No, I have not achieved the outcomes,] only because there is not enough time in a 24 hour day to get all reading and assignments done."*

Question 4: **I feel comfortable using the coursebook.**



Much praise was provided by course participants in regards to the coursebook. All felt that the coursebook was extremely well organized, easy to use, and interesting. Such overwhelming approval is impressive when one considers the student population using the guide. Many were seasoned administrators and instructors not usually prone to withholding criticism.

Question 5: **I feel comfortable using the audio roundtable.**



Use of the audio roundtable format received much criticism from participants. Though many top researchers and practitioners gave of their time to lead these discussions, the full potential of such correspondence was not enabled due to the audio format. Many respondents complained of technical problems such as poor sound quality. In addition, students voiced a need for visual interaction. Apparently, the lack of face to face communication made it difficult to decipher the messages coming over the lines. Void of body language clues, students were often confused finding it difficult to follow or understand the conversation.

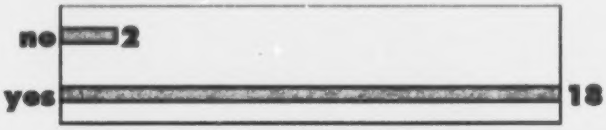
The following statements summarize the feelings of many participants.

"No. I am not an audio person and find the lack of communication cues difficult to overcome. I spent the first session wondering who was talking before I could catch content. Second session was such poor sound quality, I missed most of the discussion."

"It is very difficult to hear. I feel very isolated. There is not good interaction among the participants. There is not much focus to the questioning."

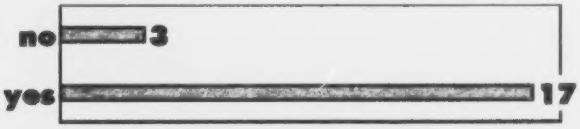
"It is difficult to stay focused when one cannot hear. I am a visual as well as auditory learner and by day's end need to engage as many senses as possible to stay focused."

Question 6: **I feel comfortable using the video.**



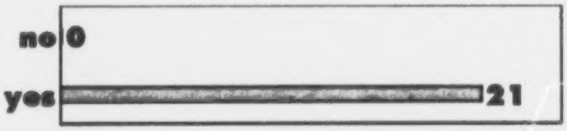
Most respondents felt comfortable using the video component of the course. Students liked having the option to rewind and view the content as often as necessary. Only a couple of participants indicated that the quality of the tapes was poor and could be improved with more graphics.

Question 7: **I feel comfortable using the independent study.**



Most participants were pleased with the flexibility afforded by the independent study. Considering their full-time responsibilities, the students appreciated the ability to work within their own schedules. A few participants indicated that they needed and desired more guidance, in fact some students chose to meet in groups to work and review material. It is important to note that this arrangement was adaptable and capable of meeting the needs of both independent and dependent learners.

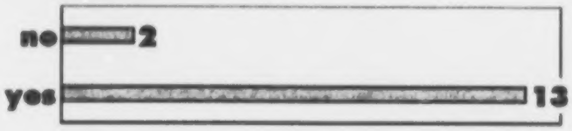
Question 8: **I feel comfortable using the facilitator-guided in-class sessions.**



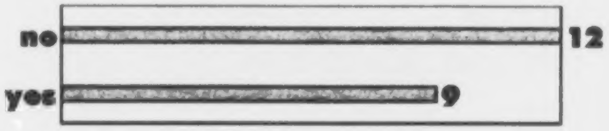
Overwhelmingly, students agreed that facilitators did an excellent job of guiding and focusing the class. The facilitated-guided in-class sessions were vital to the course, allowing the students to stay on target.

clear up misconceptions, discuss and debate the current topic. *"The facilitator is indispensable; he really keeps us on target and helps us to focus for the next session."*

Question 9: **The video equipment worked properly.**

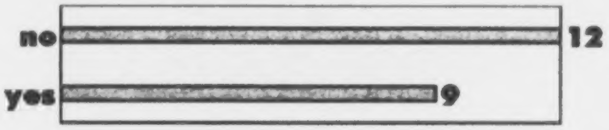


Question 10: **I used the video equipment at my home.**

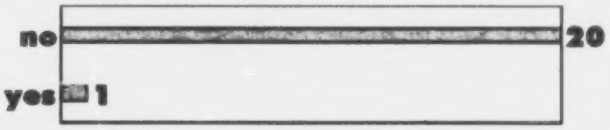


Overall, most felt that the videos and video equipment worked fine. Forty-three percent (43%) of the respondents indicated that they used their home video equipment to view the tapes. *"I viewed the videos at home on my VCR that way I could skim parts that were of special interest to me."*

Question 11: **The phone equipment worked properly.**

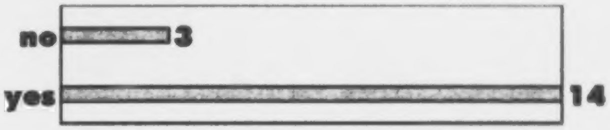


Question 12: **I used the phone equipment at my home.**

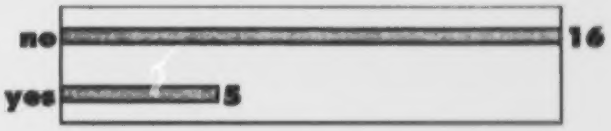


Almost all students participated in the audio roundtable from a campus site and many voiced dissatisfaction with the quality of the phone systems available. A slew of technical difficulties were cited such as *"feedback, garbled speech, poor sound quality, volume problems such as things spoken too softly or too loud."* With top experts and practitioners leading the audio discussions, this strategy should have provided valuable information to students, instead much of the value was lost due to technical difficulties.

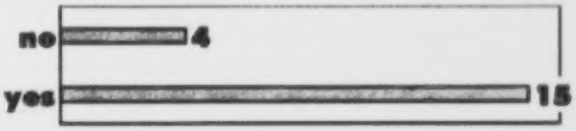
Question 13: **The computer equipment worked properly.**



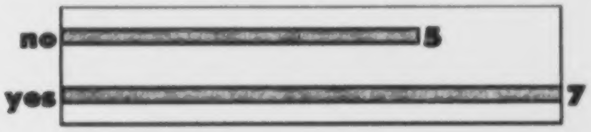
Question 14: **I used the computer equipment at my home.**



Question 15: **Email provided an effective means of communication to receive or gather information.**

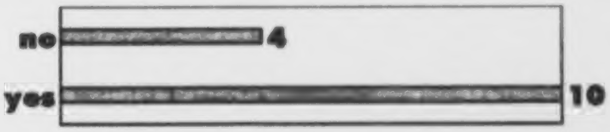


Question 16: **The Internet Homepage provided an effective means of communication to receive or gather information.**



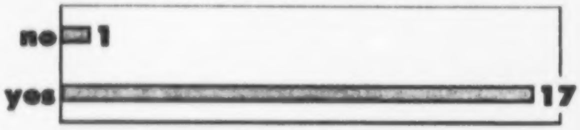
Though the course content was not available via computer, students were encouraged to use e-mail to interact with the instructors and one another and to visit the University of Florida Homepage to locate additional information on leadership in the community college. The majority of participants accessed a computer someplace other than home, i.e. office and/or lab, and they used the computer in order to send and receive e-mail messages. Only one-third of the students indicated that they used the Internet homepage to receive or gather information.

Question 17: **The satellite broadcast provided an effective means of communication to receive or gather information.**



Because of coordination difficulties, certain sites were not able to receive the orientation broadcast. Therefore, this question was not applicable for a number of students. Those that were able to see the live broadcast felt it provided a good introduction to the course.

Question 18: **During each module, I got a chance to ask the questions I had or someone else in class asked the question instead.**



All comments from students indicated that there was adequate feedback and interaction built into the modules. Students could ask questions during audio roundtables, in-class sessions, and via e-mail.

Midcourse Survey Summary

After completion of the first two modules, feedback provided from students was quite positive. Students felt they were learning something relevant to their lives and they were clear on the intended outcomes for the modules. There was overwhelming praise for the coursebook which was the organizing mechanism for the course. Students felt it was clear, precise, and filled with interesting and pertinent information.

Overall, students were comfortable using the videos and independent study format. Much appreciation was voiced concerning the amount of flexibility built into the course. Participants are extremely busy people and find it difficult to fit conventional courses into their daily routines. In addition to satisfaction with course flexibility, many indicated that the scheduled in-class time was a vital component to the program. This time allowed for clarification of the focus and procedures involved with the course and interaction among peers.

The major criticisms revealed during these first two modules were associated with the audio roundtable component of the course. Though much energy went into scheduling and securing top notch professionals to lead the audio discussions, students did not get the full value of the interactions due to poor audio quality and discomfort with the lack of face to face communication. Though these challenges were not able to be remedied midstream, they are cause for closer scrutiny in the future. Were the technical problems primarily responsible for the dissatisfaction associated with this technique or is the problem more a question of student comfort and learning styles? If so, what price are institutions and individuals willing to pay to achieve a "comfortable" course?

Course Survey Responses

At the end of the course, students were asked to fill out the Course Survey. This survey is used to determine participants' satisfaction with various components of the program, i.e. the facilitator, instructor, strategies and technologies. In addition, the survey includes questions concerning the student population so that it can be better served in the future. For the first thirty questions, students were asked to respond to the items using a five point scale with 1 = very poor, 2 = poor, 3 = average, 4 = good, and 5 = very good. Each item is listed below, along with the average response given by participants of the course.

Facilitator

1.	The clarity with which the class assignments were communicated by the facilitator	4.8
2.	The level of interaction between you and the facilitator	4.9
3.	The facilitator's preparation for class	4.9
4.	The facilitator's general level of enthusiasm	4.9

5.	The extent to which the facilitator encouraged class participation	4.9
6.	The general conscientiousness of the facilitator (e.g., in delivering materials, tuning in broadcasts, explaining assignments, etc.	4.9
7.	The accessibility of the facilitator outside of class	4.8
8.	The degree to which the facilitator or technical person was able to operate the equipment	4.5
9.	Overall, the facilitator was	4.8

Instructor

10.	The extent to which the instructor made the students feel they were part of the class and "belonged"	3.9
11.	The instructor's communication skills	4.3
12.	The instructor's organization of the class	4.2
13.	The instructor's general level of enthusiasm	4.3
14.	The instructor's teaching ability	4.1
15.	The extent to which the instructor encouraged class participation	4.1
16.	The accessibility of the instructor (via telephone, e-mail, etc.)	3.9
17.	The level of interaction between you and the instructor	3.2
18.	Overall, the instructor was	3.9

Course

19.	The timeliness with which assignments were graded and returned	3.1
20.	The level of interaction between you and other students	3.8
21.	The level of interaction between you and the course material	4.3
22.	The degree to which the Coursebook helped you gain a better understanding of the course content	4.7
23.	The degree to which the audio roundtable presentations helped you gain a better understanding of the course content	3.3
24.	The degree to which the videos helped you gain a better understanding of the course content	3.4
25.	The degree to which the independent study helped you gain a better understanding of the course content	4.0

26.	The degree to which the facilitator-guided in-class sessions helped you gain a better understanding of the course content	4.4
27.	The extent to which the room in which the class was held was free of distractions	4.7
28.	The promptness with which class materials were delivered to your site	4.1
29.	Class enrollment and registration procedures	4.2
30.	Overall, the course was	3.9

31. Compared to conventional classroom courses, this course was:

Much Worse = 0%
Worse = 15%
The Same = 35%
Better = 10%
Much Better = 10%
No Response = 30%

32. The workload required by this course was:

Too light = 0%
Moderately light = 0%
Just right = 35%
Rigorous = 45%
Too great = 5%
No Response = 15%

Summary

Responses on the Course Survey were favorable, with all items rated between average to very good. Students felt particularly satisfied with the level of services and commitment from their institution's facilitator. All statements related to the facilitator's performance were rated 4.5 or above. Students believed that the facilitator played a vital role in making the course a success. One student summarized the facilitator's role as *"...the encouraging and guidance factor; the glue that connects the course with the instructor."* While the level of interaction between the student and instructor was rated relatively low in comparison to other survey items (3.2), this deficiency was compensated for by having an on-site facilitator to which students could turn for direction and clarification of assignments.

When asked about the different components of the course and how they helped students gain a better understanding of course content, there was a clear ranking of preference. The Coursebook ranked highest with a 4.7. As indicated by the Midcourse Survey, participants were pleased with the organization and content of the guide. It enabled smooth implementation of the course, especially with the added advantage of on-site facilitators to clarify any misconceptions. Next, students felt that the facilitator-guided in-class sessions were most helpful in gaining a better understanding of course content. During these classes, students participated in lively discussions related to the current topic. They were also able to ask questions pertaining to course content and procedures.

The independent study, videos, and audio roundtable presentations all received respectable scores, but students felt these components were less helpful in allowing them to gain a better understanding of course content. Regarding the independent study, many students loved the option because of the flexibility it provided, but some were uncomfortable being left with primary responsibility of their own learning. The learning style factor comes into play again when analyzing students' comments concerning the audio roundtable presentations. Clearly, there were technical difficulties associated with this portion of the course that must be remedied for future courses, but many students indicated dissatisfaction with the format because of its impersonal nature.

Student recommendations suggested to improve the course were as follows:

- provide some two-way video interaction
- provide more immediacy of grading and feedback
- provide a summary of the telephone conferences
- do not allow students to audit the course; this encourages differing levels of participation

Even with the minor challenges and recommendations previously discussed, student satisfaction with the course was high. Fifty-five percent (55%) of respondents said that the course was the same, better, or much better compared to a conventional classroom course (with 30% not responding to this item). Students felt the course *"allowed flexibility and encouraged collaborative interaction"*. In addition, they said it was *"much more informative and enabled contact with leaders in education that would not have been possible in a conventional classroom."*

Technology for Teachers

TECHNOLOGY FOR TEACHERS 1

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Course Description

The purpose of this course was two-fold: help educators become more comfortable with using alternative approaches to teaching and learning, and help them develop practical skills for using technology to accomplish their educational goals, particularly when their goals are complex.

A primary goal of *T4T* was to stimulate the thinking of community college faculty about how to integrate technology into their own practices of teaching and learning. Another goal of the course was to help participants "learn how to learn" to use technology on their own. During the semester, participants became familiar with key concepts from the literature of cognitive psychology, motivational research, and instructional design (the theory-based side) and using computers and various software programs in teaching and learning situations (the experience-based side).

Groups of participants from the same location formed clusters with groups from different locations. Each group had contact with a local facilitator, a remote teaching assistant (TA) located on the Florida State University (FSU) campus, the course administrator/instructor (from FSU) and, for problems associated with the web site, the web master (located out of state). Student groups consisted of two to four participants from the same site and clusters were made up of two to four groups from distant sites.

A graduate from the Instructional Systems Design (ISD) program in the Department of Educational Research at FSU assumed primary responsibility for the design and development of the course. He had an innovative design for computer-supported learning environments using the World-Wide-Web that, with the programming assistance contributed by NCR to the project, became the *T4T* working model. Construe, the software developed for this course, provided a flexible framework or shell for creating web-based learning environments with potential applications in a wide range of subject areas in both educational and work-related contexts.

Prerequisites: This course was designed for faculty and staff in the community college system. It was expected that most students would have completed a master's degree and have taught in the community college. Word-processing skills and an e-mail account were also required. (3 graduate credits)

Course Numbers

EME 5054	Technology for Teachers (*T4T*) Florida State University
EDA 6931	Instructional Technology for Community College Faculty University of Florida

Delivery Strategies

Satellite orientation session
Whole class activities
Small group activities
Reading assignments
Reactions to articles
Software applications
Internet based web site with e-mail capabilities

Course Components and Requirements

Whole-Class Activities.

Participants met in whole-class sessions at either their local teleconferencing studio or computer lab during the first two and last two sessions of the course. The first session of the course was an orientation offered via satellite. A facilitator at each site handled registration and passed out syllabi for the course and background survey forms. During the second session, which occurred two weeks later, facilitators assigned participants to small groups and coordinated two in class exercises, one on how to use Inspiration software to create concept maps and the other on how to use the Netscape web browser. Participants at each location met in whole-class sessions to share their project plans using desktop presentation software during the last two sessions.

Individual Responsibilities.

Individual responsibilities included managing e-mail, reading detailed directions and following assignments, doing tutorials, reading several assigned articles, reading articles from the on-line literature pool, writing reactions to articles, defining key concepts and selecting excepts from articles, and writing various reports. Individual responsibilities also included contributing reactions, concept definitions, excerpts, and reports to an on-line community database.

Tutorials covered such subjects as e-mail, the Internet, Netscape, Inspiration concept mapping software, desktop presentation software, and other subjects pertinent to using technology that was embedded into the course. Access was also provided to a number of web sites that offered on-line tutorials in a range of pertinent topics. In retrospect, some participants would have benefited from more support for basic computer literacy skills, a finding we will return to later.

For the first three weeks of the semester, all participants read the same articles concerning educational theory in order to establish a common foundation for approaching the wide breadth of practicle topics available in the course. From weeks four through eight, participants were responsible for selecting articles they wished to read from an on-line literature pool. Participants were required to read a minimum of one article each week, as a general rule.

Participants defined key concepts from the articles they read and selected meaningful excerpts that illustrated how the authors used the concepts in context. To guide them in this process, the Instructor created a list of some 50 concepts derived from the articles. The purpose for this list of concepts was to provide a focus for inquiry and group discussions and help define the "breadth of coverage" for the course. It was not intended to be definitive, and participants added many new concepts that they felt were important.

Participants made public or "published" much of their work using the Construe web environment. This not only included entering concepts, definitions, and excerpts into a kind of community hyperglossary but also creating a personal Home page and submitting Reading Reactions, Best Practices, and Project Plans using custom web forms. Everyone who participated in the course was required to create a Home page which included: name, e-mail address, ID. photo, and other information for identification purposes. The Reading Reactions forum on the web site provided participants with a form for commenting on articles they read and a resource for deciding what to read next. Best Practices required participants to search the WWW and report on educational practices that demonstrated the infusion of technology into teaching and learning in promising ways. Project Plans, which were a main focus of the course, required participants to describe how they planned to use technology in their own classrooms or work context in a way that was consistent with key concepts from the readings.

Activities were sequenced so that first a simple case that closely represents a real-world task was selected and then the ways in which this version of the task differs from more complex versions was identified. Over time, complexity and variations were added systematically to the learning activity with the expectation that the method preserves the potential benefits of in-context learning. In *T4T*, to complete the sequence of Home Page to Best Practices to Project Plan required increasing levels of knowledge, skill, and confidence.

Participants were further required to submit two other types of reports during the semester, including two Weekly Reports and an end-of-semester Reflection. The Weekly Reports provided opportunities for participants to assess how their groups were functioning, comment on the quality of learning experiences they were having, and offer suggestions for changes or improvements in the course. Weekly Reports were held confidential between the Instructor and TAs. The Reflection asked participants to comment on how they used the accumulating knowledge-base of the community, how they would use technology differently as a result of the *T4T* course, and, finally, anything else on which they wished to comment.

Group Responsibilities.

Group meetings were required from weeks 4-9 and optional during the final weeks of the course. Groups met once-a-week at a time agreed upon by members. During group meetings members discussed articles, carried out a variety of group assignments, and helped each other learn how to use the technology to complete individual assignments. A central function of the group was to share important ideas from the readings and develop knowledge of key concepts and their relations. Groups used Inspiration software to represent this knowledge in the form of concept maps which some participants used to guide them in formulating plans for infusing technology into their own classrooms. Of note, during week four, group members read an assigned article, viewed a videotape produced by the Cognitive Technology Group at Vanderbilt University (nine copies were donated to the project by Optical Data corporation), and responded to a series of questions. This activity provided an opportunity for participants to look at an alternative method of teaching and learning and consider how it might be relevant to their own practices

Electronic Communications.

T4T participants used e-mail as the primary mode of electronic communications. We had intended to make extensive use of listserv technology and make IRC (Internet Relay Chat or "Chat") available too; however, because of the difficulty of developing and delivering a course under the time constraints required by this project, the server used at the beginning of the course did not have listserv capabilities. This server was located at NCR in Dayton, Ohio. Eventually a server became available at Academic Computing and Network Services (ACNS) at FSU, but by then it was too late to implement the listserv feature.

A Summary of Experiences Developing and Managing the Course

This section of the report presents a summary of experiences during development and management of the *T4T* course through a list of recommendations that anyone thinking about providing distance education on the Internet and WWW might consider.

One general lesson learned from this project is that if provisions are not made to anticipate the kinds of problems students are likely to experience in using emerging technologies to support self-directed learning and mutual inquiry, the technology can easily become an obstacle to establishing the kind of learning process it was designed to foster in the first place. Additional recommendations follow:

1. Provide instructional support for basic computer literacy skills and establish realistic prerequisites for the course.

2. Set-up on-line registration and require participants to have their own e-mail accounts in order to register for the course.

3. Thoroughly field test on-line help and directions for completing assignments and using features of the system and make them available well in advance of when participants will need them.

4. Establish minimum (threshold) hardware requirements for participating institutions and for students who choose to work at home.

5. Establish network standards and e-mail capabilities that are compatible with course activities. Contact network administrators at institutions to ensure that participating institutions meet these standards.

6. Ensure that a computer lab administrator or assistant will be available to help groups deal with technical problems.

7. Check with your institution's academic computing and networking service to make sure there is a server available for your course and someone to act as system administrator.

8. Develop effective strategies for promoting a sense of community and shared mission among members of the community.

Personnel

Instructor

David Lebow (instructor and designer)	Educational Research, FSU
Walter Wager (instructor of record)	Educational Research, FSU

Additional Support

Nancy Gilbert	Educational Research, FSU
Peter Marks	NCR Corporations

Facilitators

Greg Ballinger	Miami-Dade Community College
Barbara Bird	St. Petersburg Junior College
Paul Blais	Valencia Community College
Jen Day Shaw	St. Petersburg Junior College
Pat Ellis	Florida Community College at Jacksonville
John Henderson	Broward Community College
Mattie Roig	Broward Commity College
Jayne Salvo	Brevard Community College
Norma Thompson	Indian River Community College
Marcia Williams	Pensacola Junior College
Jim Yount	Brevard Community College

Costs

Course Development

Course design for this course began during the first meeting held in May 1995. This meeting was attended by professors at both universities, administrators at the community colleges and several individuals who were possibly going to be assigned as facilitators. During this and subsequent meetings, community college personnel indicated that this course had to accommodate the various platforms and technologies at the community colleges.

The grant proposal indicated that IBM would be contracted to develop and deliver the technology course. It became apparent that IBM's proposal would not provide the flexibility required by the various community colleges to meet their technology training needs. For example, St. Petersburg Junior College only used Macintosh computers and many of the other institutions used both PC and Mac computers. IBM would only develop materials for, and train faculty, in a PC environment. IBM's proposal also suggested that instruction would be delivered via two-way video/two-way audio methods, which required compatible systems and special telephone lines not available at most institutions.

A graduate of the instructional design program at Florida State University was recruited to work with a professor in the department of Educational Research to design and develop the course. The decision was made to use the Internet to deliver the course, thereby eliminating the issue of whether to use a Mac or PC platform. Rather than selecting specific software products for the course, it was determined that, for the most part, students would select for their assignments and projects software available at their own institutions. By the September 1995 meeting, the course designer had conceived a model and had started to review existing software for course delivery. The curriculum development specialist was consulted on delivery strategies appropriate for the community college sites.

An estimate of those course development costs which can be assigned to a specific course are as follows:

Faculty member	$ 7,395	*
Instructional designer	21,409	*
May meeting (1/4 time)	1,766	
June meeting (1/4 time)	1,012	
September meeting (1/4 time)	1,333	
November meeting (1/4 time)	870	
Document scanning	1,252	
Computer software	4,241	
Total	$39,278	

* includes salary and fringe benefits

After careful review of available software for course delivery, the course designer determined that the desired structure for this course required the development of specific software for course delivery. The professor from the Educational Research department and the dean of the College of Education met with officials from NCR Corporation who, recognizing the potential of the design to meet their own training needs, agreed to develop the software as an in-kind contribution to the ILDDL project.

Course Delivery

The course designer, who had assisted the professor in an on-campus section of the course offered fall semester, 1995, was assigned to teach as an adjunct faculty member, both an on-campus and a distant section of *Technology for Teachers* during the spring semester, 1996. As with the fall semester course, *The American Community College*, the facilitators at the community colleges were given partial release time from other assignments to help with the delivery of the course. An estimate of the amount of time expended by facilitators to deliver this course was one-half time, with another one-fourth of their time spent on the delivery of a second course offered during spring through this project, *Instructional Leadership in the Community College*. Two institutions selected different facilitators for each of the two courses offered in the ILDDL project during spring term. Several institutions only offered *T4T*.

Some institutions also provided a second person with expertise in computer technologies to assist the facilitator and students enrolled in this course. This high level of involvement by one or more individuals at the community college sites was due to several factors: (a) the software to support the course was being developed as the students worked on the course, allowing for modifications from the students' experiences - this caused anxiety at times, requiring facilitators' expertise and time to accommodate students' needs; (b) each community college had different hardware and software configurations, creating unpredictable situations that had to be analyzed and worked through; (c) some students subscribed to an Internet provider to have access to the course from home, increasing the hardware and software variables even more; (d) a few students had difficulty with relatively simple computer skills needed for successful completion of the course; (e) even the acquisition of an e-mail address became an almost insurmountable task for one student (who was finally assigned an e-mail address three weeks prior to the conclusion of the course).

Most of these challenges should not be encountered with subsequent offerings of *T4T*. The software has been refined, many of the "bugs" have been removed and hardware and software incompatibility have been identified. In addition, more specific prerequisites and requirements for enrollment in the course have been identified.

In addition to the programming conducted by NCR at no cost to the project, a large group of students at Florida State University, enrolled in a course on distance learning, volunteered to assist by serving as teaching assistants, each one responsible for a group of three students enrolled in *T4T*. They communicated with the distance students mostly via electronic mail, supplemented by telephone conversations when needed.

Printing and mailing costs were much less in this course than in the course offered during the fall semester. A syllabus was duplicated and mailed to facilitators to distribute to students and all other instructions were sent via e-mail or posted on the web site for the course. When the course is offered again, it is expected that most instructional materials will be posted on the course's home page and only general instructions on how to log on and simple trouble shooting will be provided on paper. Assignments and projects were submitted electronically to the instructor at Florida State University.

Estimated delivery costs of *Technology for Teachers* are as follows:

Faculty member	$ 0	
Instructional designer	12,296	*#
Facilitators (8) 1/2 time	36,200	**
Duplicating costs (syllabus)	1,096	
Mail and express mail	381	
Academic Computing Network Services	3,000	
Total	$52,973	

* Includes salary and fringe benefits

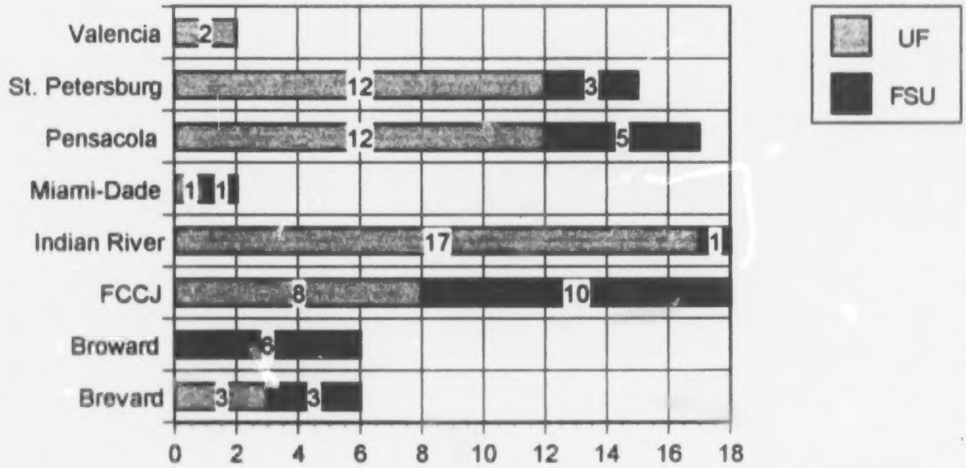
# The designer was paid this amount while the course was in progress, much of his time was dedicated to working with the programmer and in modifying materials to adjust to students' needs and technology conditions at the institutions, and perhaps should be classified as a course development expense.

** This cost is expected to decline once courses have been pilot tested and delivery systems implemented that are less dependent on facilitators.

Students

A total of 93 students originally enrolled (i.e. turned in checks, application forms, and registration forms) in the *Technology for Teachers* (*T4T*) course. Only 84 of those students were active in the course and had a grade disposition posted by the end of the semester. Figure T4T1 shows the distribution of students by community colleges and also indicates the university from which students opted to earn credits. Initial review of student outcomes appears very positive. At this point we concur that a large number of students were able to be served by this course and appear to have learned how to implement technology in their individual settings.

Figure T4T1
Students Enrolled by Community College



Figures T4T2 and T4T3 show the make-up of the class. Fifty-eight of the students responding to the course survey were females and 39% were males; 10% were African American, 79% Caucasian, 4% Hispanic, 0% Native American, and 3% other.

Figure T4T2
Gender

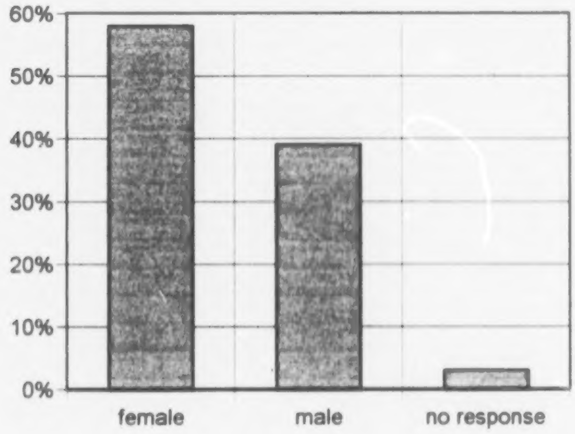


Figure T4T3
Race

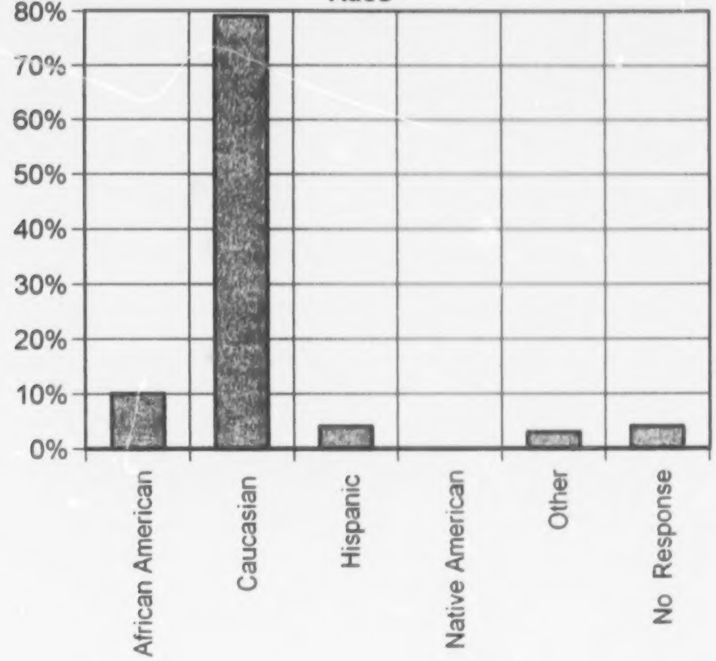
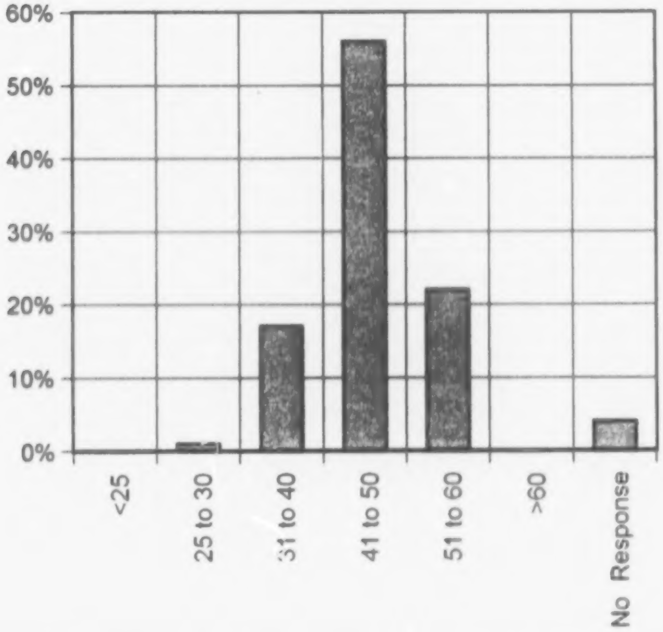


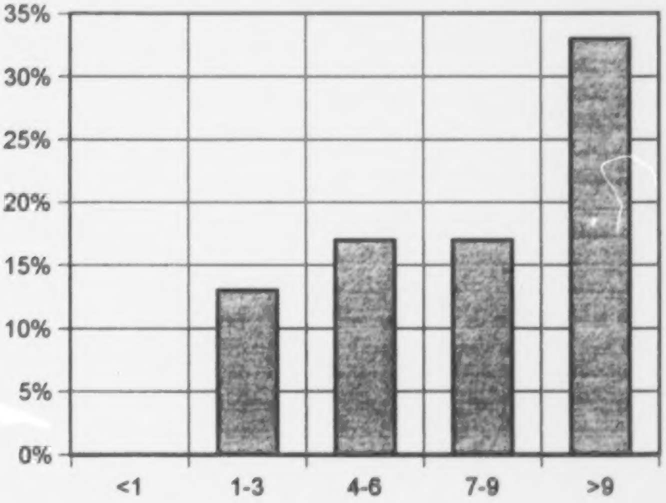
Figure T4T4
Students' Ages



The majority of students fell in the 41 to 50 year old range, though student ages ranged from early thirties up towards sixty. It is understandable that the 30 to 60 age cohort is actively pursuing courses in technology. The use of technological tools is rapidly becoming a large part of everyday life and work, and it is likely that many in this age group did not have the opportunity to learn technology related information in their formal education programs.

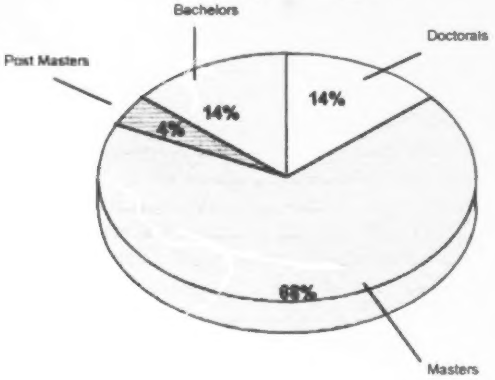
A large majority of the *T4T* students were full time employees (76%) and had been employed for a long period of time by the community college system (See Figure T4T5). This is somewhat surprising when considering that the original audience intended to be reached by the ILDDL grant was incoming or newly hired faculty at the community colleges. Apparently, there is a market for these distance learning courses, but it seems to be different than what was expected. This is important to note, since some of the decisions concerning course content and delivery systems took into account the intended audience.

Figure T4T5
Years Employed by Community College



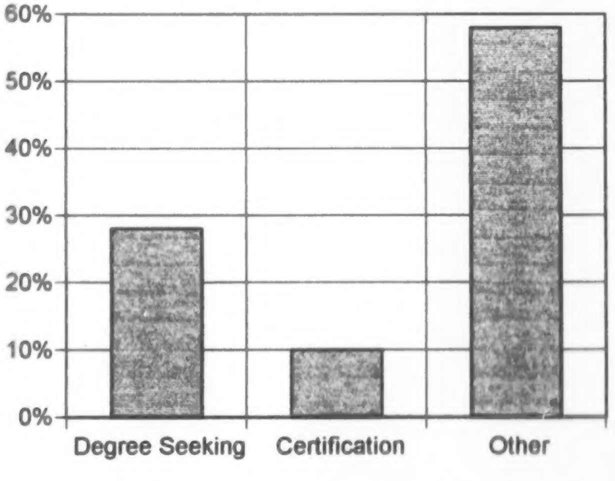
As mentioned earlier, the majority of *T4T* students were full time employees of their community colleges serving in faculty/teaching positions. Courses that they taught ranged across all disciplines: English, Computers, Math, Psychology, Child Development, Adult Basic Education, Biology, Chemistry, Leadership, Health, Statistics, Nursing, Automechanics, Sociology, Marriage and Family, etc.. When asked what type of degree they held and from which discipline did it come, again the answers varied. Most of the respondents held a Masters Degree or higher and the remaining had their Bachelors Degrees (See Figure T4T6).

Figure T4T6
Type of Degrees



Participants in *T4T* enrolled in the course for a variety of reasons. Twenty-eight percent were enrolled in order to complete a degree, 10% were seeking certification, and 58% of the student respondents listed "other" explanations for taking the course, see Figure T4T7. Under the "other" category, many reasons were cited such as: personal enrichment, wanting to learn more about technology, and curiosity about distance learning.

Figure T4T7
Reason for Taking Course



A need for technology courses is indicated by the students' responses to the question, "Would you still have been able to take this course if it had not been offered through the FSU/UF Distance Learning program?" Eighty-two percent of the respondents said they would not have had access to such a course if it had not been for the program. In addition, 75% of the respondents said that they would enroll in another distance learning course offered through the ILDDL program (Figure T4T9). These answers indicate there is a need to bring higher education instruction and access to advanced degrees to professional people working at the community college level.

Figure T4T8

Would you still have been able to take this course if it had not been offered through this project?

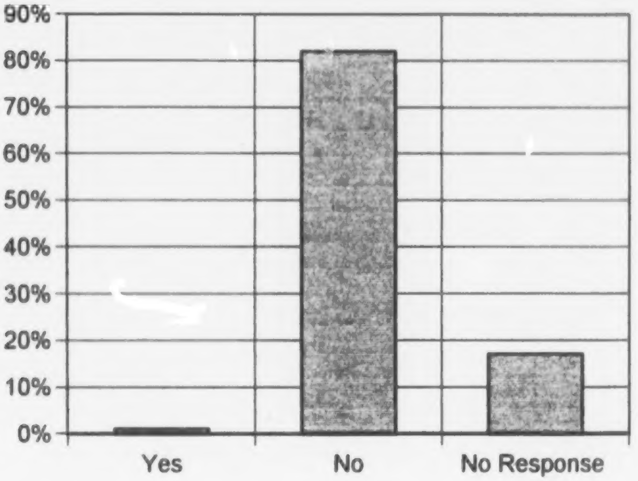
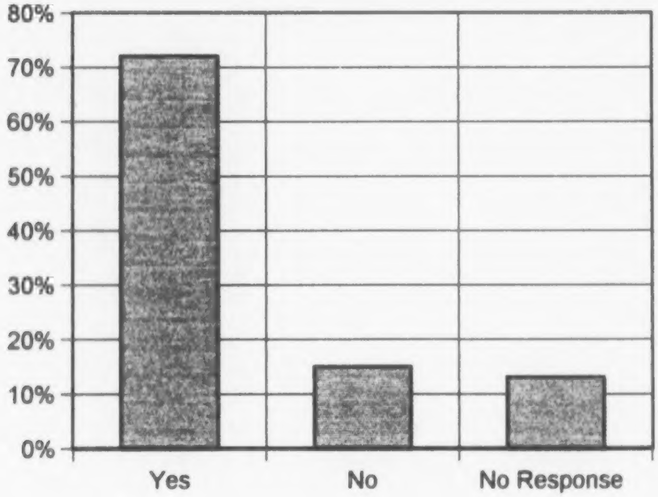


Figure T4T9

Would you enroll in another FSU/DL Course?



Formative Data

At the end of the course, students were asked to fill out and return a Course Survey. This instrument was designed to provide information concerning the student population and its perception of the course. Specifically, data was collected on student characteristics, effectiveness of course components, appropriateness of content, and initial outcomes. Other sources of information were used to obtain a comprehensive understanding of *Technology for Teachers* including facilitator interviews and reflection questions posed by the course developers. Below are the survey results followed by a summary which includes all sources of inquiry. The first thirty-seven questions were responded to by using a five point scale with 1 = very poor, 2 = poor, 3 = average, 4 = good, and 5 = very good. Each item is listed below, along with the average response given by participants of the course.

Facilitator

1.	The clarity with which the class assignments were communicated by the facilitator	3.9
2.	The level of interaction between you and the facilitator	4.1
3.	The facilitator's preparation for class	4.4
4.	The facilitator's general level of enthusiasm	4.7
5.	The extent to which the facilitator encouraged class participation	4.5
6.	The general conscientiousness of the facilitator (e.g., in delivering materials, explaining assignments, etc.)	4.5
7.	The accessibility of the facilitator outside of class	4.3
8.	The degree to which the facilitator or technical person was able to operate the equipment	3.9
9.	Overall, the facilitator was	4.3

Instructor

10.	The extent to which the instructor made the students feel they were a part of the "class" and "belonged"	3.4
11.	The instructor's communication skills	3.6
12.	The instructor's organization of class content	2.8
13.	The instructor's general level of enthusiasm	4.2
14.	The extent to which the instructor encouraged participation	3.8
15.	The accessibility of the instructor (via telephone, email, etc.)	3.9
16.	The level of interaction between you and the instructor	3.1
17.	Overall, the instructor was	3.7

Teacher Assistant

18.	The level of interaction between you and the TA	2.9
19.	The TA's communication skills	3.1
20.	The extent to which the TA provided assistance to students	2.7
21.	Overall, the TA was	3.0

Course

22.	The timeliness with which feedback on completed assignments was provided	2.6
23.	The clarity of feedback provided	2.9
24.	The level of interaction between you and other students	4.0
25.	The level of interaction between you and the course materials	3.6
26.	The degree to which the printed instruction helped you gain a better understanding of the course content	3.0
27.	The degree to which email helped you gain a better understanding of the course content	3.5
28.	The degree to which the "concepts" feature helped you gain a better understanding of the course content	3.1
29.	The degree to which working independently helped you gain a better understanding of the course content	4.2
30.	The degree to which the group work helped you gain a better understanding of the course content	4.2
31.	The degree to which sharing ideas with your cluster helped you gain a better understanding of the course content	3.2
32.	The extent to which the computer lab was functional for carrying out class activities	3.2
33.	The web site interface was	3.8
34.	The compatibility of available hardware/software with course requirements	3.3
35.	The promptness with which class materials were delivered to your site	3.0
36.	Class enrollment and registration procedures	3.9
37.	Overall, the course was	3.3

38. Compared to conventional classroom courses, this course was:

Much worse = 11%
Worse = 31%
The same = 17%
Better = 22%
Much better = 9%

39. The workload required by this course was:

Too light = 0%
Moderately light= 0%
Just right = 18%
Rigorous = 53%
Too great = 20%

40. The course was relevant to some aspect of your life.

yes = 96%
no = 3%

41. You learned what you expected to learn from this course.

yes = 68%
no = 26%

42. How did you access the course primarily?

Home Computer = 31%
Office Computer = 28%
Campus Computer = 24%
Home & Office Computer = 7%
Campus & Office Computer= 2%
Home & Campus Computer= 0%
Other = 3%

43. Prior to taking Technology for Teachers, how often did you use the technological strategies covered in this course?

Never = 28%
Infrequently = 24%
Occasionally = 35%
Most of the time= 8%
All of the time = 4%

44. How often do you plan on using the technological strategies that you used in Technology for Teachers?

Never = 0%
Infrequently = 1%
Occasionally = 35%
Most of the time= 48%
All of the time = 14%

45. Did your experience in Technology for Teachers motivate you to invest in personal computing technology (i.e. a computer, RAM, increase modem speed, software, etc.)?

yes = 70%
no = 25%

Course Survey Summary

Students and facilitators offered numerous comments and suggestions regarding the course, with the overriding consensus being that it was frustrating at times but valuable in hindsight. While much of this section describes limitations of and improvements to the course, one must remember the following remarks, indicative of what was said by so many respondents:

- *"It [the course] was frustrating at times, but I learned a lot and I feel better prepared technologically."*
- *"Great class. At times a great deal of frustration, however, it was worth it. I anticipate the course will smooth out in future offerings. Thank you."*
- *"This was indeed a learning experience; however, it was frustrating and difficult. I think learning should be challenging not difficult. But I do now know much more about the Net than I did before, and I am more knowledgeable about the computer and net jargon."*

The remainder of this section is organized around the following topics:

- Instructional Support
- Course Delivery, Content, and Components
- Outcomes
- Recommendations and Accolades

Instructional Support

Students were provided with personal support through interaction with a facilitator, an instructor, and teaching assistants (TAs). The facilitators were located onsite at the various community colleges whereas the instructor and TAs were located at Florida State University, communicating with students primarily through email.

Facilitator

According to responses on the course survey, students were pleased with the level of support provided from site facilitators. Comments indicated that facilitators were enthusiastic, well-prepared, and easily accessible. However, both students and facilitators stressed that in future offerings, the facilitator should be knowledgeable in technology. *"Of primary importance is the presence of an onsite lab technician to help students with their technical problems."* The many nuances associated with hardware and software make it essential that someone onsite knows how to troubleshoot challenges as they arise. For this course, technical difficulties were literally compounded by the fact that most participants (59%) accessed the course on their individual home or office computers. Technological support is imperative for success in this type of distant learning arrangement.

Instructor

Students rated the instructor above average on all but one item on the Course Survey. They felt the instructor was extremely enthusiastic and committed to the course. However, students expressed concern over the instructor's lack of organization and planning. *"The course was poorly organized. The constant revisions and re-revisions through email were unnerving."* One should note, though, that development time for this complex course was limited and students' perception of the course being developed in process was accurate. In some instances, facilitators noted that students were placated by the idea of this being a pilot course and on the "cutting edge". However, most felt *"it was the most disorganized course I have ever taken. There was changing of requirements and grading. We would get an assignment but not the directions or resources on the Web. I don't fault the work level of the instructor, I just think he bit off more than he could chew".*

Teaching Assistants

For the voluteer Teaching Assistants, ratings on the Course Survey reflect average or slightly below average satisfaction, but many students did not respond to these items. They felt the questions were not applicable since the role of their TA was "nonexistent". One student said, *"Fire the TAs and get someone who will at least respond when we email!"* In fairness to the TAs it should be noted that not all were as bad as these quotes reflect. Many were unclear about their role in the course, and because of the logistics involved with just keeping the course up and running, the instructor could not spend much time defining and refining that role. Students felt the idea of a TA was good one but would have liked better qualified and trained individuals to provide the needed support.

Course Delivery, Contents, and Components

The Course Survey, reflection questions, and facilitator interviews provided insight into the those things that worked well and those that required improvement. Student input on course components such as grading procedures and feedback, the participants guide, activities/ readings, and group interaction/collaboration will be provided here.

Grading Procedures and Feedback

Students were unclear about how they would be graded and when assignments were due. Also, many students indicated that they were not sure if their assignments were ever received. One facilitator mentioned, *"There was a lot of anxiety over grading and no feedback during the entire semester."* Granted, much of the philosophical foundation of the course was focused on real learning and not achieving for a grade, but this is a big leap for learners to take and many had valid concerns since grades are important for graduate school admission, promotions, and permanent records. Students and facilitators suggested that the *Technology for Teachers'* syllabus delineate more clearly the assessment procedures and end results associated with the course.

Students also voiced frustration over the lack of feedback on assignments. *"It would have been nice to have some feedback early on about concepts, reactions and some way of knowing that you had the material we thought we turned in."* This is one flaw that will likely be much improved in future offerings. The pilot course granted developers a concrete understanding of the complex logistics and enormous "paperwork" involved in such an undertaking. Next time it is expected that the TAs will be adequately prepared and their roles better defined to include the provision of participant feedback.

Participants Guide.

Future courses will also find a more complete and concise participants guide. Early on in the pilot, the printed participant's guide was replaced with "just in time" instruction via email; such correspondence was disconcerting to follow and overwhelming in number. Since this was the initial offering of *T4T* via the Internet, many logistics had to be determined resulting in instructions being altered midstream. This was a source of great confusion to students and immediately after the course's conclusion, developers began developing an updated, easy to follow and thorough guide for participants that would be available through the website or in printed format.

Activities and Readings.

In regards to course activities, many indicated that their must be *"a prerequisite requirement in terms of the technological skills needed to complete many of the assignments. It is important that students have the skills necessary to work through the technology associated with the activities. It can be very frustrating to complete an assignment by first having to learn the technology necessary."* Many students were unfamiliar with the Internet and first had to become acclimated to the Web environment. *"Students need to become familiarized with certain technological functions such as email, downloading, etc.."* Both facilitators and students suggested that a quick introduction to the Internet be incorporated at the course's onset. At St. Petersburg Junior College (SPJC), students were offered an orientation to the Internet by community college staff, and according to the facilitator, *"All the people who took the orientation didn't ask me questions about it during T4T."*

Students who were either fast learners or equipped with the necessary prerequisite skills found the course activities to be useful and pertinent. *"I have explored programs that I had not used before (Inspiration, PowerPoint) and I plan to use them in the future."* Some suggested that the sequence of activities be altered, allowing easier to use software to be used first followed by more difficult applications. *"Move up use of PowerPoint and push back Inspiration. PowerPoint is easy and draws a lot of enthusiasm."* Others commented on the use of Inspiration software, *"Assignments involving software like Inspiration, should be implemented on the context of students' areas of expertise, rather than having it relate to educational jargon that will most likely be forgotten by the end of the course"*.

Students' Infusion Projects were the grand finale of the course. They were quite impressive, denoting depth of understanding and the ability to fine-tune technology to individual needs. Facilitators commented on how each project was *"so tied into reality and geared towards the participants' students and the available technology."* A few students claimed that they were overwhelmed by the enormity of the assignment. They suggested that Infusion Project guidelines be provided at the very beginning so that they can be thinking about and working on it throughout the semester. One person said it would be less anxiety producing if this assignment were divided into several smaller tasks. However, other students expressed appreciation that the course and assignments were *"challenging and conducted on a graduate level"*.

The course involved a large theoretical reading base from which students were to choose, read, and comment. The Article and Concept components of the *T4T* Web page were designed so that students could furnish their ideas to the "community" and build on their own ideas using the contributions of others. Many individuals missed the point of this exercise, commenting that they did not see the need for such busywork. *"Don't give us busywork. We are adults, and we work hard on the assignments that we use for academic presentations in our own classrooms. We do not need definitions and articles to keep us busy."* In addition, students expressed discontent with the theoretical nature of the articles, leading one to believe that the link between learning theories and how they influence the use of technology was not made by many in the class. The following comment was typical; *"I was not interested in learning about educational theory; I was interested, however, in using Inspiration to develop lesson plans"*. One facilitator explained, *"They need more practical articles"*. This same person said, *"In future courses, they should just add more practical articles to the reading base and leave the theoretical ones. Then developers could see which ones actually get read"*.

Developers of the course feel the theoretical component is crucial to meaningful learning and a learner's ability to adapt technology as it evolves. For this reason, it would be interesting to follow-up with some of the *T4T* students to learn if the theoretical component of the course becomes more meaningful once they are back in their own classrooms implementing technology.

Group Interaction and Collaboration.

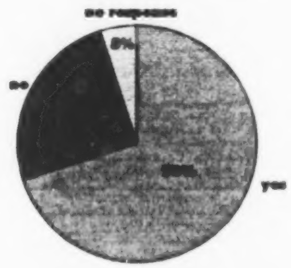
Students and instructors felt that group interaction was vital, and they expressed a desire for more communication with one another. *"The group activities were enjoyable and valuable." "It facilitated a* *sense of community and offered support and encouragement."* However, the cluster component of the course never reached its full potential. Developers had intended for individuals at various locations with common interests to share ideas and discuss topics in cyberspace via a Listserve or some other form of groupware communication. Once again, the limited development time did not allow for determining the logistics of such communications.

Lack of built-in community interaction or a forum component may have impeded the level of collaboration involved in the course. In looking at students' use of the Web site, developers noted that students were much more apt to use information but not as likely to contribute to the community knowledge base. Students did not seem to comprehend the larger picture and the philosophical foundation of the course. Developers are currently researching ways to motivate and facilitate students' use of collaborative learning in an Internet environment.

Outcomes

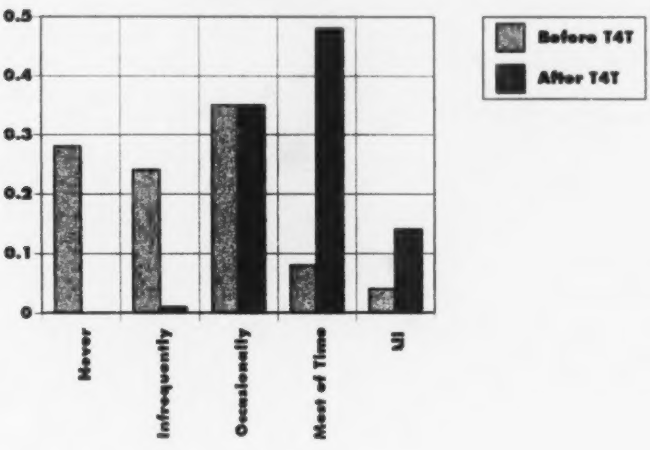
Initial outcomes of the course can be found in the students' Infusion Projects where many detailed, concrete examples of technology are seen. Again, what was most remarkable about these projects was the level of intensity and specificity to individual environments. In addition to the Infusion Projects, initial outcomes showed a literal buy-in to technology (Figure T4T10). When asked if their experience in *T4T* motivated them to invest in personal computing technology, seventy percent (70%) of the students indicated that it had, with many investing in entire systems or upgrading current ones. Granted, some inferences are made here, suggesting that buying hardware and/or software means using it, but these are expensive purchases and it is unlikely that individuals would invest such large sums of money without purposeful intentions.

Figure T4T10
Investment in Technology



Students' self-report on how often they used technology prior to *T4T* and how often they plan to use technology after having taken *T4T* shows some promising future outcomes (Figure T4T11). Fifty-two percent (52%) of respondents said they had never or infrequently used technology prior to taking *T4T*, 35% reported that they used it occasionally, and 12% said they used it most or all of the time. After taking the course, all participants indicated they planned to use technology in their own classrooms. One percent (1%) said they would use technology infrequently, 35% said they would use it occasionally, and 62% believed they would use technology most or all of the time. These figures are encouraging and show students' commitment to implementing technology. However, these are only students' expectations, future studies are essential for determining the real amount of change and transference taking place in community college classrooms.

Figure T4T11
Use of Technology



Recommendations and Accolades

Below are summarized versions of the recommendations provided by facilitators and participants.

- Provide more feedback
- Incorporate a mechanism or procedure so students know when their work has been received
- Provide introduction to Internet
- Provide clearer, more concise instructions and information on assignment deadlines
- Be more sensitive to the needs of target audience; grades were very important to this audience
- Begin course with easy applications and progress towards more complex technologies
- Provide a forum component where the community can easily interact
- Reassess the theoretical bent to the course. If it remains in future courses, provide sufficient information on its purpose so that students make all necessary connections between theory and practice
- Better define and prepare the TAs' role
- Modify assignments so they relate to students' areas of expertise and/or interests
- Build in outcome studies to assess level of transference

In addition to the above recommendations, the most important suggestions for improving the course were:

- Have the course ready before offering it
- Be more specific about hardware and software requirements
- Make sure there is a technology person available on each campus responsible for providing support to *T4T* students
- Require specific, technology-related prerequisite skills

It is interesting to note that course designers requested a technology point of contact from facilitators and contacted that person. How available this technology person was to students (who were faculty and staff from their community college) varied from site to site.

Perhaps the biggest limitation to the course was that it was not ready to be offered. As one student put it. *"[The course was] an excellent concept but flawed in execution".* Many students were enthusiastic about the knowledge gained and about making changes in their classrooms. *"Overall, I thought the course was worthwhile. [It provided] a valuable way to learn what is out there on the Net and to begin to design, develop and implement technology as an instructional aid."* One facilitator commented. *"I don't think there was a student who didn't say he learned so much".* Because of time constraints, *T4T* was not able to reach its true potential. However, this course has the capacity for being a powerful mechanism enabling educational change and reform. It is recommended that sufficient time and resources be provided to remedy the problems and to research those areas in question. In addition, information on long-term outcomes, i.e. how teachers are implementing technology in their courses, would be valuable in assessing the real value and power of *Technology for Teachers.*

Effective Teaching in the Community College

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Course Description

A team of instructors captured on videotape guided an examination of the science and art of effective teaching. Classroom and individualized instruction were examined including objectives-oriented instruction, evaluation, student motivation, and media utilization in the college curriculum. (3 graduate credits).

The students (targeted at new teaching faculty in the community college) would be able to analyze their teaching, identifying best and worst teaching characteristics and describing their current teaching practice in terms of models of teaching presented during the course. Students were expected to analyze a teaching opportunity from their experience and incorporate methods presented during this course into a lesson plan. Drawing on scholarly research, cinematic depictions of teaching practices, and student comments, the students related the issues of planning, evaluation, diversity, and professionalism to their understanding of teaching for the purpose of improving instruction.

Prerequisites: This course was designed for faculty and staff in the community college system involved in teaching with subject matter expertise but little training in teaching methods. It was expected that most students would have completed a master's degree and have some teaching experience in the community college.

Course Numbers

EDH 5305	Effective Teaching in the Community College Florida State University
EDA 6931	Effective Teaching Practices for Community College Faculty University of Florida

Delivery Strategies

Videotaped instruction
Reading assignments
Analysis of films
Videotaped discussions
Reflective written assignments

Course Content

Comprehensive Units

These instructional units were conceptualized in such a way that the content was not specific to any one topic or segment of the course. Rather, the comprehensive units dealt with broad conceptual categories that related to all areas that define effective teaching. There were two comprehensive units. The first, which dealt with varying aspects of effective teaching, and the second with delivery methodologies.

Aspects of Effective Teaching (Unit One)

In this comprehensive unit, individual component parts of effective and ineffective teaching practices, teacher values, and teacher attitudes were considered. This consideration began with a general description of the organization of the entire course, making it apparent where unit one "fit." This session not only contained the organization of the content and the work to be completed, but also provided the conceptual framework for other information to be learned. The second segment of unit one was comprised of a discussion by college students thinking back across their entire educational experience and identifying best and worst teachers via descriptions of the behaviors and attitudes which identified these teachers as such. Unit one concluded with a videotaped lecture on ten aspects which differentiate more and less effective teachers. An assessment assignment followed the Unit.

- Course Overview
- Best and worst teachers: Student Reactions
- Ten Aspects of Effective Teaching
- Assignment 1: Reflective Writing on Individual's Best and Worst Aspects as a Teacher

Alternative Delivery Methods and Styles (Unit two)

The comprehensive unit on differing methods and styles of instructional delivery centered on four specific methodologies. The unit began with an explanation of the four differing models. Direct instruction was presented in a lecture format and was identified as a 16 component model. The concept development model was explored via a concept development lesson on one of the films used in the topical unit portion of the course (see below). The inquiry model was demonstrated using a tape of an inquiry based research presentation by students using the methodology. The case study method was examined using one of the films. The case study method was used to examine direct versus indirect teaching and the role of questioning strategies in that film.

- Explanation of four models
- Direct Instruction Model: Lecture on TEACH Model
- Concept Development Model: Sample Lesson
- Inquiry Model: Sample Demonstration
- Case Study Model: Classroom Discussion
- Assignment 2: Description of how a sample lesson in individual student disciplines could be taught using EACH of the FOUR models presented in Comprehensive Unit 2

Topical Units

Topical units were narrower and more content specific. They dealt with some aspect of effective teaching. These topics included planning, the process of preparing to teach; evaluation, the process of assessing student accomplishment; diversity, the ability to recognize and teach to individual differences; and professionalism, dealing with ethical, moral and personal commitment to the teaching and learning process. Each of these topical units had a one-hour lecture in which the topic was presented on videotape. The units provided a broad-based introduction to current theory and best practices. Specific readings identified for each topical unit supported and expanded the lecture. Each topical unit also used a feature film. The film was viewed after previewing a guide which directed learners to the relevant components of the film that dealt with the topic of the unit. Each topical unit included a video discussion in which some dimension of the film, related to the topic, was discussed by a group of college students. Each topical unit concluded with a reaction paper that integrated student opinions with information from the lecture, the readings, guided viewing of the film, and videotaped student discussions.

• PLANNING -	Lecture, Readings, Viewing Guide, Film- "Dead Poets' Society", Video Discussion, Reaction Paper
• EVALUATION -	Lecture, Readings, Viewing Guide, Film - "Paper Chase", Video Discussion, Reaction Paper

- DIVERSITY - Lecture, Readings, Viewing Guide, Film - "Stand and Deliver", Video Discussion, Reaction Paper
- PROFESSIONALISM - Lecture, Readings, Viewing Guide, Film - "Teachers", Video Discussion, Reaction Paper

A letter grade was assigned for completion of this course. Each of the six assignments carried equal weight. A panel of three graders was assembled, trained, and supervised by the course instructor. Each assignment was read and graded by two of the three graders. Papers assigned differing grades by the graders were reviewed by the instructor for a final grade determination.

Personnel

Instructor

Jack Miller	Dean, College of Education The Florida State University

Guest Presenters

Clyde Maurice	Educational Leadership, FSU
James MacMillian	Educational Foundations, FSU
Robert Reiser	Educational Research, FSU
Michael McKenna	Georgia Southern University

Facilitators

Doug Andrews	Miami-Dade Community College
Kathy Watson	St. Petersburg Junior College
Paul Blais	Valencia Community College
Mattie Roig	Broward Community College
Jen Day Shaw	St. Petersburg Junior College
Pat Ellis	Florida Community College at Jacksonville
John Henderson	Broward Community College
Jayne Salvo	Brevard Community College
Norma Thompson	Indian River Community College
Marcia Williams	Pensacola Junior College
Jim Yount	Brevard Community College

Costs

Course Development

Course design began during the first meeting held in May 1995. However, since this was to be the last of four courses offered, more attention was directed toward the other courses during the meetings held in June, September and November 1995. Course delivery aspects were finalized during the April 1996 meeting. Discussions with facilitators helped define the course goal and the major topics to be covered in the course. These included aspects of effective teaching and models of effective teaching. During the course students would also analyze their own teaching to identify best and worst characteristics and to be able to modify their own instruction to incorporate methodology presented during the course. Four additional topics included in this course were planning, diversity, evaluation, and professionalism. The instructor selected films as case studies to address each of these topics.

The dean at the College of Education, Florida State University, was the lead instructor for this course. During the spring semester, while teaching an Honors seminar on the art and science of teaching, he was videotaped presenting material and leading class discussions. While the cost of videotaping was borne by the project, the dean's efforts in planning and presentation were part of his regular load. Other professors at Florida State University presented videotaped lectures and organized additional assignments for the course. The curriculum development specialist was involved in the coordination of videotaping, post-production activities and the development of the student guide, assisted by the project director.

Post-production at Brevard Community College reduced the videotaped material to approximately 18 hours, organized into the six major topics of the course as designed by the instructor. To assist in this effort, the project director and the curriculum development specialist at FSU traveled twice to Brevard Community College. A total of six days were spent on post-production activities.

An estimate of those course development costs which can be assigned specifically to *Effective Teaching in the Community College* are as follows:

Faculty member	$ 0
Additional faculty	14,932
May meeting (1/4 time)	1,766
April meeting (1/2 time)	1,971
Video production	3,675
Video post-production	11,297
Total	$ 33,641

Course Delivery

The professor's cost to deliver the course was not charged to the project since he (the dean) regularly taught one course per semester. The facilitators were given partial release time from other assignments to help develop and deliver the course. The facilitators were provided with a complete package which contained a facilitators' guide, videotapes, films and student guides. It is estimated that one-half of the facilitators' release time was spent on course delivery activities. This is estimated at $2400 for salary and fringe benefits per facilitator.

The curriculum development specialist assisted in administrative and logistical features of the course, including registration issues and communication with facilitators and students. With a requirement of six written assignments and with over sixty students enrolled in this course, the instructor needed assistance with grading. A panel of three graders was assembled, trained, and supervised by the course instructor. Each assignment was read and graded by two of the three graders. Papers assigned differing grades by the graders were reviewed by the instructor for a final grade determination.

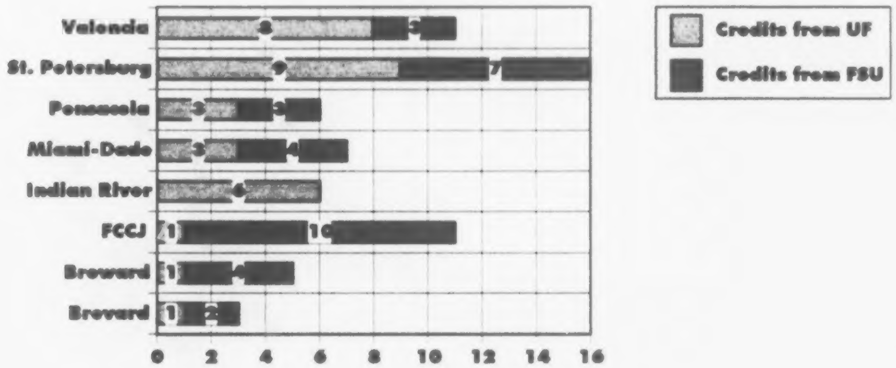
Students were offered the opportunity to purchase their own personal set of videotapes in order to provide additional flexibility during the summer term. The higher than expected demand for this service generated additional duplicating and mailing costs. When the course is offered again, a videotape rental system may be developed.

Faculty member	$ 0
Facilitators (8) 1/2 time	36,200
Video duplication	1,837
Films	543
Textbooks	232
Duplicating costs (student guides)	750
Mail and express mail	1,400
Graders	4,101
Total	$ 45,063

Students

Sixty-five students enrolled in the *Effective Teaching* course, representing individuals from all eight participating institutions. Figure ET1 indicates the distribution of students by community college and also reveals the university from which students opted to earn credits. St. Petersburg Community College required their newly hired faculty to take the course, resulting in 16 participants from that college alone. Forced enrollment may have lessened the motivation and thus the learning of these students. Evidence for such an assumption is provided in the following section.

Figure ET1
Students Enrolled by Community College



Figures ET2 and ET3 show the composition of the class. Eighty-four percent (84%) of the students responding to the course survey were females and 16% were males; 3% were African American, 84% Caucasian, 6% Hispanic, 3% Native American, and 3% other.

Figure ET2
Gender

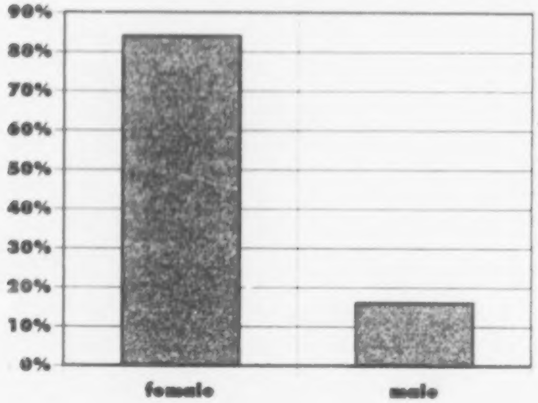
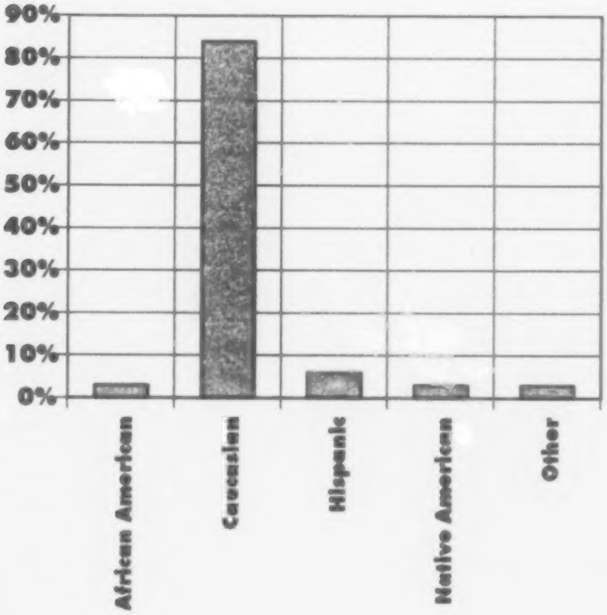
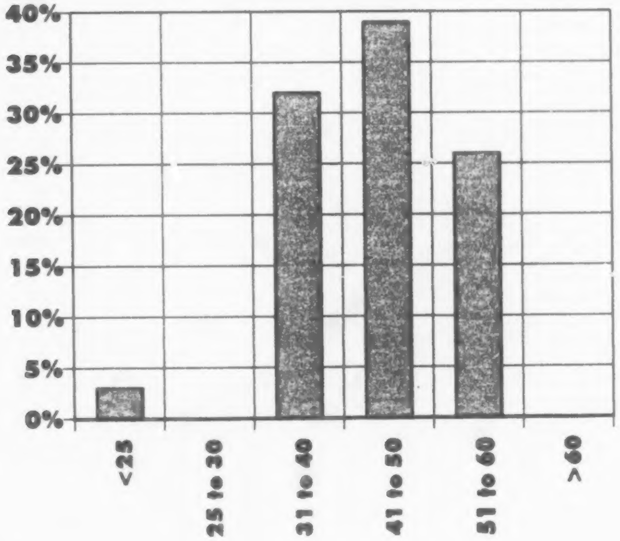


Figure ET3
Race



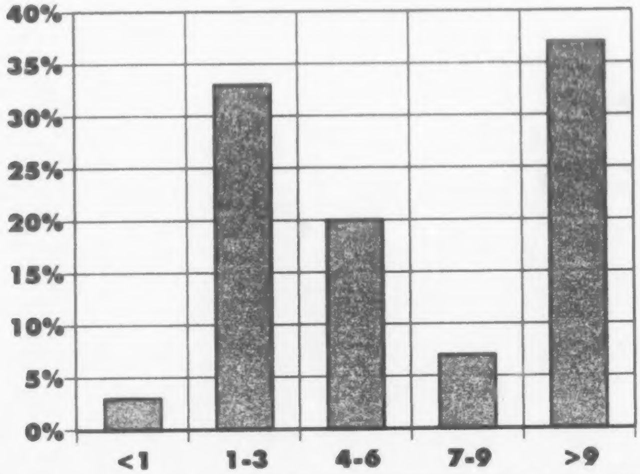
Most participants fell into the 41 to 50 year old age bracket, though students' ages ranged from below 25 years up towards 60 years old. Figure ET4 indicates age distribution of course participants.

Figure ET4
Students' Ages



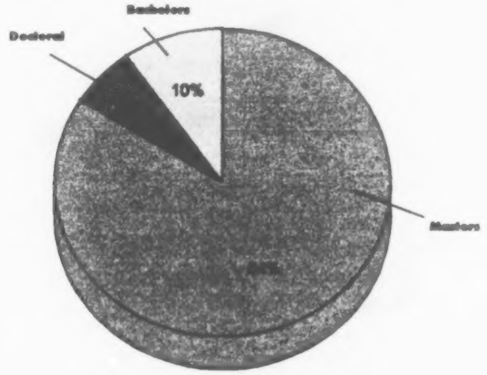
Thirty-seven percent (37%) of course survey respondents indicated that they had been employed by the community college system for over nine years. See Figure ET5. This is surprising, considering the intended target audience was to be incoming or newly hired faculty at the community colleges. This mismatch between intended and actual audience may account for some of the course discontent revealed in the results section. Some students expressed that the course was too elementary. In fact, the basic make-up of the course may have been well suited for beginning community college instructors but only 36% of participants fit that description.

Figure ET5
Years Employed by Community



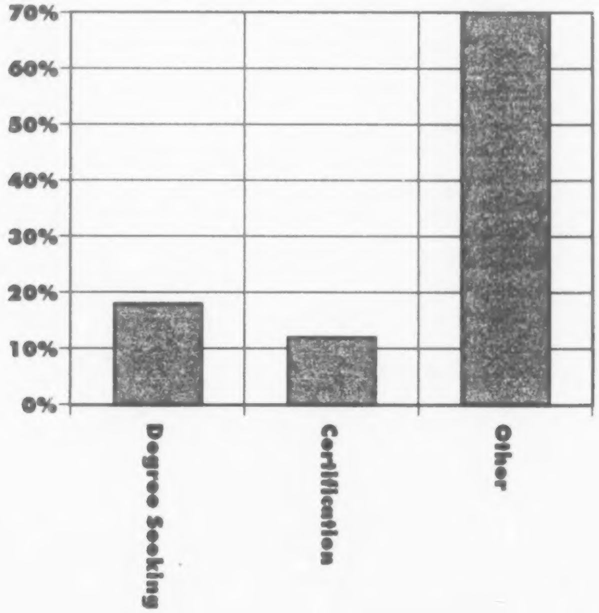
All respondents were employees of their community college serving in faculty/teaching positions. Eighty-eight percent (88%) were employed full-time and 12% were in part time positions. Courses they taught ranged across all disciplines: English, Economics, Nursing Fundamentals, Psychology, Biology, Chemistry, Anatomy, Physiology, Linguistics, Algebra, Business, Computers, Public Speaking, etc.. Most held a Master's Degree or higher and the remaining participants had their Bachelors Degrees. See Figure ET6.

Figure ET6
Type of Degrees



When asked, "what was their reason for taking the course," most respondents indicated that they were taking it for reasons other than for certification or a degree (Figure ET7). As mentioned earlier, many were taking the course because it was required by their institution; others chose to partake for personal enrichment or professional development.

Figure ET7
Reason for Taking Course



A need for distance courses is indicated by the students' responses to the question, "Would you still have been able to take this course if it had not been offered through the FSU/UF Distance Learning program?" Seventy percent (70%) of the respondents said they would not have had access to such a course if it had not been for the program (Figure ET8). In addition, 70% of the respondents said that they would enroll in another distance learning course offered through the ILDDL program (Figure ET9). These answers indicate that a distance learning format may be a viable option for bringing needed higher education instruction to professional people working at a community college.

Figure ET8
Would you still have been able to take this course if it had not been offered through this project?

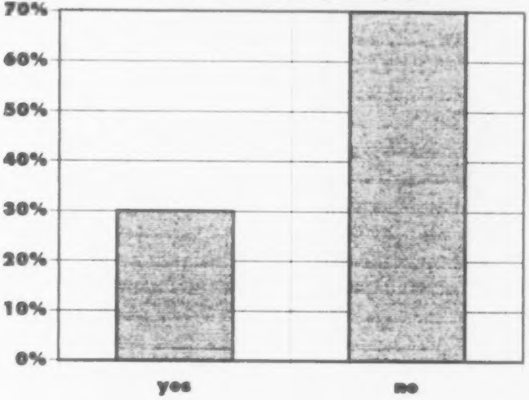
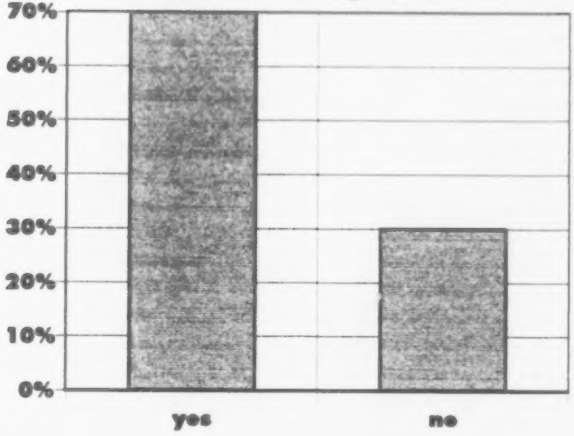


Figure ET9
Would you enroll in another FSU/UF Distance Learning Course?



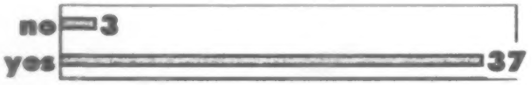
Formative Data

Students were asked to fill out and return a Midcourse Survey and an end of Course Survey. The Midcourse Survey was administered in order to detect problems while the course was in process. Since this course was developed in such a manner that it could not be changed midway, there were no intentions to use the formative data to remedy problems as they occurred. Instead, the Midcourse Survey was intended to be used for future modification of the course. The end of Course Survey was distributed to better understand the student population and its perception of the course. Together, these instruments provide information on the effectiveness of course processes, strategies, and technologies along with appropriateness of course content. This section presents an overview of the survey results.

Midcourse Survey Responses.

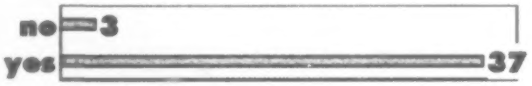
Due to the nature of the course, students proceeded through the units at different rates. To capture feedback from students as they independently reached the middle of the course, the Midcourse Survey was incorporated into the Student Guide; students were asked to complete and return the instrument after they had finished both Comprehensive Units and the Topical Unit on Planning. When reviewing the following information, readers should note that in many instances students would skip over certain questions while replying. These inconsistencies result in the varying numbers reported below.

Question 1: **During this course, I am learning something that is relevant to my life.**



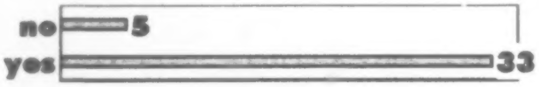
Most respondents agreed that they were learning something relevant to their lives, specifically they mentioned how the course was contributing to their teaching ability. Students seemed to have a genuine interest in analyzing and improving their teaching techniques. Most were satisfied with the course content. *"[I think] reflection on our profession is always useful. I have become locked into particular approaches in my subject. This course is giving me the opportunity to think about alternatives."* However, some commented that the course content was inappropriate for graduate level instruction and that there was little applicability to the community college setting. *"The first part of the course appears to be at the undergraduate level with little application to practicing college educators."* These divergent opinions are voiced throughout the surveys and may be due to the amount of participants' teaching experience.

Question 2: **I am aware of the learner outcomes pertaining to this course.**



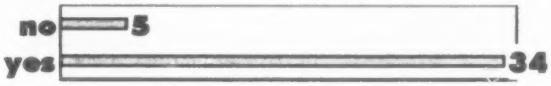
Students were clear about the learning outcomes pertaining to the course. Many commented that the outcomes were plainly explained in the Student Guide.

Question 3: **I am achieving the outcomes pertaining to this course.**



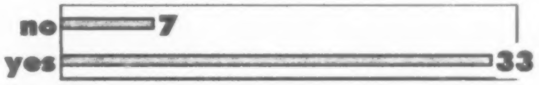
Though some students were unclear about their achievement due to lack of feedback, the majority looked at accomplishment less in terms of achieving in the course and more in terms of how they were implementing ideas and changes in their own teaching. Many commented that the skills they were learning in the course were already being incorporated in their own classrooms. *"I have already decided to implement some of these ideas in my courses. The course also allowed me to evaluate both positively and negatively the way I teach my classes."*

Question 4a: **I feel comfortable using the Student Guide.**



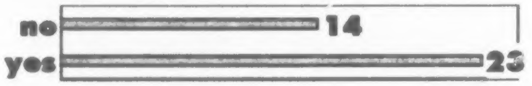
Most students felt comfortable using the Student Guide, but open-ended comments related to this question revealed divergent opinions about the layout and organization of the document. Some students expressed dissatisfaction with the guide, stating that it was "*poorly laid out, missing information, and confusing*"; others indicated that the guide was *"quite thorough and easy to follow"*. Differing opinions related to the guide may be due to (a) individuals' learning style preferences and whether or not they prefer to learn independently, or (b) whether students expected the guide to be an additional authoritative source of content information or a scaffolding for information they collected during the course. Some flaws such as misnumbered pages and incomplete information were reported. At least one facilitator distributed an advance unbound (and incomplete) copy of the Guide.

Question 4b: **I feel comfortable using the Instructional Video.**



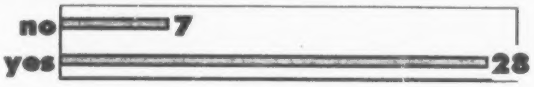
Respondents felt comfortable using the video but many offered suggestions for improvement such as improving the sound quality, cutting down on the length, and eliminating redundancy in the discussions.

Question 4c: **I feel comfortable using the Independent Readings.**



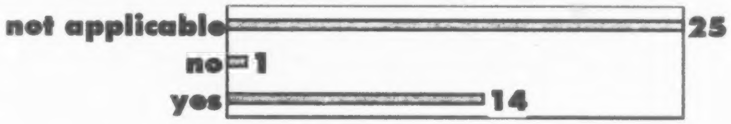
Students thought the reading selections were informative, but many expressed considerable frustration over obtaining them. One student's comment is indicative of what was said by many: *"Some readings were difficult to obtain. For example, the Planning suggestion was not available in the entire Orange County Public Library system or any large bookstores I checked with. It was suppose to be on reserve at Valencia's library, however no one seems to know anything about it. I have attempted to purchase this book myself, though the major bookstores doubt it will arrive in time to use to complete my assignment. Our facilitator did supply some photocopies of a few of the suggested readings and additional readings, which was a help. This is the area that has been most frustrating."*

Question 4d: I feel comfortable using the Feature Film Case Study.



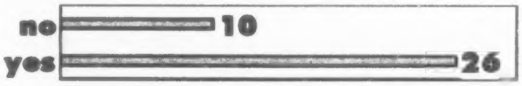
Again this is an area of personal preference. Most students enjoyed this component and felt that the *"films were classical examples of strategies explained in the theory part of the class"*. Students also expressed that the films *"added depth to the course and made it more interesting"*. However, a few believed that the films added little to the course and were not representative of what really goes on in teaching.

Question 4e: I feel comfortable using the Facilitator-guided In-class Sessions.



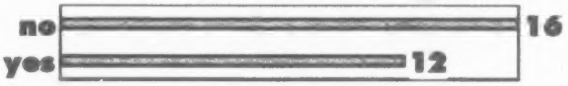
The course was structured so that participants at independent sites could choose to hold classes. For instance, at St. Petersburg Junior College, they actually held classroom times for viewing and discussing the videotapes. At Florida Community College at Jacksonville, tapes were limited so the facilitator reserved classes in order for people to view the videos. Individuals at those sites that used this option found the in-class sessions to be *"most beneficial"*. However, as the numbers indicate, many chose not to meet in classes and viewed tapes and materials independently.

Question 5: I had enough instructional support.



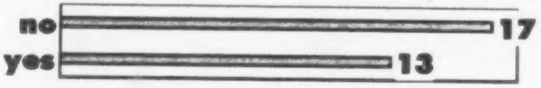
The majority of students felt there was enough instructional support built into the course. *"The materials, videos, reprints and student guides are well done for a distance learning mode. To date, I have not needed any additional support."* For those that did need extra guidance, the facilitators were available to answer questions and provide direction. However, some were confused and unclear about due date, content, and formatting of assignments. One student suggested that *"the course have short class meetings weekly to help with concepts and directions."* This individual stated that he *"felt lost most of the time"*.

Question 6: There is effective communication between the instructor and student.

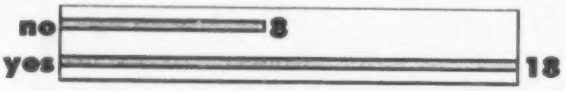


Some students expressed dissatisfaction with the level of feedback and interaction provided by the instructor of the course; they felt they were not encouraged to make necessary contact. However, others stated interactive communication was not needed because the course was well organized, and they were able to learn course objectives without contacting the instructor. Again, this diversity is likely due to the level of comfort students felt with the learning arrangement.

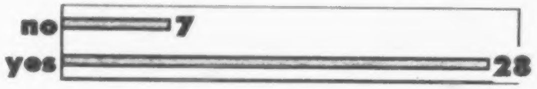
Question 7a: **Email provided effective means of communication.**



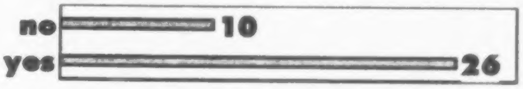
Question 7b: **Telephone provided an effective means of communication.**



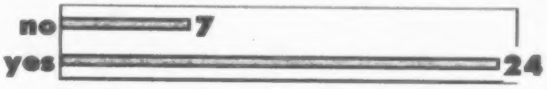
Question 7c: **The Student Guide provided an effective means of communication.**



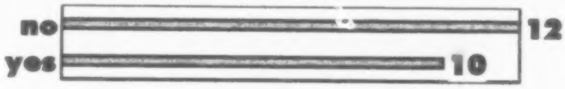
Question 7d: **The Instructional Video provided an effective means of communication.**



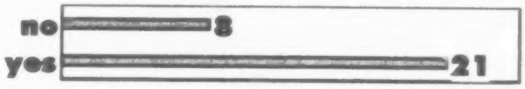
Question 7e: **The facilitator provided an effective means of communication.**



Question 7f: **Fax machine provided an effective means of communication.**



Question 7g: **Mail provided an effective means of communication.**

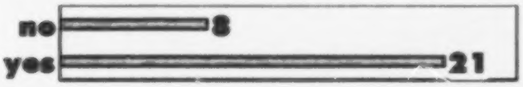


Throughout the course, various mechanisms were used to communicate with students. Below is a synopsis on students' use of these tools.

- **Email** - Most students did not have access to email and therefore did not use this communication option. Those that were fortunate enough to have email found it to be a valuable way of communicating with the instructor and course coordinator. Limited experience with sending and receiving email attachments and restrictions made by some system administrators in the size of attachments allowed made using email for turning in assignments problematic. It worked for some and not for others.

- **Telephone** - Many students used the telephone to contact the facilitator, course coordinator, and the instructor and found this avenue to be helpful in getting questions and concerns addressed.
- **Student Guide** - Overall, students thought that the Student Guide effectively communicated the content and instructions associated with the course. There were opposing feelings in terms of the organization of the guide. Some expressed that it was *"well organized and the instructions were stated clearly and concisely"*. Others believed the opposite, that the manual was *"set up very poorly"* and that *"it should be carefully reworked to be smoother and clearer"*.
- **Instructional Video** - Most students believed the videos adequately communicated the lessons and assignments. Suggestions to enhance this delivery mechanism included improving both the video and sound quality, reducing length of tapes by eliminating redundancy, and using a taped student audience more reflective of those taking the course.
- **Facilitator** - The majority said that facilitators were helpful in answering questions and administering materials. However, some students indicated that they had little interaction with their facilitators and others claimed that the facilitators were as confused about course procedures as the students.
- **Fax Machine** - Approximately the same number of students claimed that they did and did not use this option. Those who did use the fax indicated that they had no feedback as to whether their fax was received by the instructor. Students that had access to facsimiles and chose not to use them indicated concern over their work being transmitted clearly.
- **Mail** - Many students chose to use conventional mail to send in their assignments. In terms of the effectiveness of this delivery mode, many were uncertain because they had no feedback as to whether or not their work had been received.

Question 8: **During this course, I got a chance to ask the questions I had or someone else asked the questions instead.**



In the forced choice question, most respondents indicated that they did get a chance to ask questions. However, open-ended comments associated with this question depicted a slightly different opinion. Some students voiced concern over the lack of interaction with the instructor, in particular students were dissatisfied with the lack of directions provided on course logistics and assignments. *"[I had] no opportunity to interact with the instructor the way the on-campus class did. Many of my questions were not asked in the video discussion."*

Midcourse Survey Summary

After halfway through the course, students had both positive and constructive feedback to share. The majority of participants felt that they were learning something relevant to their lives, specifically they commented that the course content had enhanced their teaching capabilities. Also, students were aware of the course outcomes and felt they were learning them and applying them within their own classrooms.

Conflicting opinions were noted on a number of subjects. Some students expressed that the Student Guides were poorly arranged and confusing while others said the guides were organized and thorough. With regard to communication between the instructor and students, some lamented that there was no interaction and others expressed no need for direct communication. This divergent thinking was also apparent when students responded to the item about having enough instructional support. These conflicting messages are important when one considers the future expansion of distance learning. Are some individuals better able to thrive in distant learning environments? What are the delineating factors of success and are they more associated with individual attributes or environmental variables? How do we set up distance learning environments that meet the needs of many learners at a reasonable cost? These are some of the questions suggested by the conflicting messages of survey respondents.

Course Survey Responses

At the end of the course, students were asked to fill out the Course Survey. This survey is used to determine participants' satisfaction with various components of the program, i.e. the facilitator, instructor, strategies and technologies. In addition, the survey includes questions concerning the student population so that it can be better served in the future. For the first thirty-eight questions, students were asked to respond to the items using a five point scale with 1 = very poor, 2 = poor, 3 = average, 4 = good, and 5 = very good. Each item is listed below, along with the average response given by participants of the course.

Facilitator

1.	The clarity with which the class assignments were communicated by the facilitator	3.7
2.	The level of interaction between you and the facilitator	3.8
3.	The facilitator's preparation for class	4.0
4.	The facilitator's general level of enthusiasm	4.3
5.	The extent to which the facilitator encouraged class participation	4.3
6.	The general conscientiousness of the facilitator (e.g., in delivering materials, explaining assignments, etc.)	3.8
7.	The accessibility of the facilitator outside of class	3.7
8.	The degree to which the facilitator or technical person was able to operate the equipment	4.0
9.	Overall, the facilitator was	4.0

Instructor

10.	The extent to which the instructor made the students feel they were a part of the "class" and "belonged"	2.8
11.	The instructor's communication skills	3.4
12.	The instructor's organization of class content	3.7
13.	The instructor's general level of enthusiasm	3.8

14.	The extent to which the instructor encouraged participation	3.5
15.	The accessibility of the instructor (via telephone, email, etc.)	2.8
16.	The level of interaction between you and the instructor	2.0
17.	Overall, the instructor was	3.4

Curriculum Specialist

18.	The level of interaction between you and the Curriculum Specialist	3.5
19.	The Curriculum Specialist's communication skills	4.3
20.	The accessibility of the Curriculum Specialist	4.1
21.	The extent to which the Curriculum Specialist provided assistance to students	3.8
22.	Overall, the Curriculum Specialist was	4.2

Course

23.	The timeliness with which feedback on completed assignments was provided	1.4
24.	The clarity of the feedback provided	1.3
25.	The level of interaction between you and other students	3.0
26.	The level of interaction between you and the course materials	3.7
27.	The degree to which the printed instruction helped you gain a better understanding of the course content	3.7
28.	The degree to which email helped you gain a better understanding of the course content	2.0
29.	The degree to which the telephone contact helped you gain a better understanding of the course content	2.5
30.	The degree to which working independently helped you gain a better understanding of the course content	3.7
31.	The degree to which instructional video helped you gain a better understanding of the course content	3.3
32.	The degree to which feature film case studies helped you gain a better understanding of the course content	3.2
33.	The degree to which the Student Guide helped you gain a better understanding of the course content	3.5
34.	The degree to which independent readings helped you gain a better understanding of the course content	3.3

35. The degree to which group work helped you gain a better understanding of the course content 3.2

36. The promptness with which class materials were delivered to your site 2.2

37. Class enrollment and registration procedures 3.6

38. Overall the course was 3.1

39. Compared to conventional classroom courses, this course was:

Much Worse = 15%
Worse = 39%
The same = 21%
Better = 15%
Much Better = 9%

40. The workload required by this course was:

Too light = 3%
Moderately light = 3%
Just right = 52%
Rigorous = 36%
Too great = 6%

41. The course was relevant to some aspect of your life.

yes = 91%
no = 9%

42. You learned what you expected to learn from this course.

yes = 70%
no = 30%

Course Survey Summary

Students had mixed feelings about the *Effective Teaching* course. Twenty-four percent (24%) said the class was better or much better than a conventional course. One student commented, "*[the course was a] commendable blend of teaching techniques and delivery methods*". Such students loved the convenience afforded by this instructional arrangement and were willing to overlook some of the associated limitations. *"I enjoyed the variety of instructional materials, and I especially enjoyed sitting at home with my feet up after a brutal day of work in comfort, going to class."*

On the contrary, 54% felt this distance learning class was worse or much worse than a conventional course. Students attributed their dissatisfaction to a number of factors. Many were uncomfortable with the lack of interaction with the instructor and other students. *"I needed more contact with the instructor, the facilitator offered minimal help. I had no direction and no clear cut criteria for papers."* In addition, many commented on the lack of feedback. *"I am disappointed that I did not receive any feedback even from the early assignment. It would have been useful in completing the final assignments."* Students expressed frustration because of the difficulty in obtaining materials. *One student commented that "all articles and videos need to be on campus prior to starting class. It was very frustrating not to have those* *available when I needed them*". Another problem was the use of a videotaped class that did not accurately reflect the intended audience. Many felt the course was a general course, not specifically designed to address the issues concerning community colleges. One student said, "... *the bulk of tapes were simple taken from a Freshman/Sophomore non-majors course at FSU. This was an insult to community college faculty - many with degrees in education and many years of experience in education.*"

Student recommendations to improve the course were as follows:

- Improve the Student Guide by reordering pages and providing a sheet with assignment deadlines and due dates (this was included on page 10 of the Guide as it was used)
- Make sure a sufficient supply of all materials are available
- Provide more information on the content, format, and length of assignments
- Build in a mechanism verifying whether or not work has been received at the instructor's site
- Provide quick feedback on performance and grades
- Build more of the community college perspective into the content
- Use a taped audience more representative of students taking the course (using this strategy could facilitate the acceptability of concepts being illustrated but missed the point made in the video concerning the broad applicability of some core concepts)
- Increase the level of two-way communication with the instructor
- Make it clear that the student has an absolute right to contact the instructor with questions and concerns
- Improve graphic and sound quality of videos

Despite some of the disparaging comments and recommendations made by students, 91% felt that the course was relevant to some aspect of their lives. Remarks related to this item revealed that participants did learn from the course and were using much of the information to improve their own instruction. "*[This class] helped me learn better teaching techniques.*" "*[This course] made me take a look at better techniques to spice up delivery methods.*" Follow-up studies of these participants would help determine how much information was learned and transferred into their own classrooms. Immediate feedback provides some slight evidence that the intended learning outcomes were learned and internalized even though many students were not comfortable with the learning arrangement. However, at this time, there is not enough data to draw any general conclusions concerning changed instructional behaviors in individual classrooms.